DOCUMENT RESUME

ED 212 371 PS 012 636

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TITLE Success in Nonpromoted First Grade Children. Final Report.
INSTITUTION California Univ., Davis. Dept. of Education.
SPONS AGENCY National Inst. of Mental Health (DHHS), Bethesda, Md.
PUB DATE Jun 81
GRANT PHS-28765-02
NOTE 212p.

EDRS PRICE MF01/PC09 Plus Postage.
DESCRIPTORS *Academic Achievement; Attendance; Classroom Environment; Cognitive Development; Comparative Analysis; Emotional Development; Family Characteristics; *Grade 1; *Grade Repetition; Longitudinal Studies; Parent Attitudes; *Predictor Variables; Primary Education; Social Development; *Success; Tables (Data); Teacher Attitudes

ABSTRACT

This research was designed to delineate the effects of the retention in grade process upon a child's academic, social, and emotional development. The primary purpose of the study was to identify characteristics of children who benefit from the retention process. The secondary purpose was to identify those factors from the retained year that contribute to success during that year. One-hundred-forty-six first grade children, identified by their teachers in the spring of 1979 as candidates for retention, were monitored. Of the total group, 84 children remained in the first grade for the following school year and 62 were promoted to the second grade. All 144 children were individually tested with a variety of instruments designed to measure intellectual functioning, cognitive and physical development, academic achievement, perceptual-motor ability, and interpersonal relationships. Additionally, in order to establish the relationship of parental and teacher attitudes and classroom organizational strategies to success following the non-promotion or promotion of children, subjects' parents and teachers were interviewed and the teachers' classes were observed in spring 1979 and spring 1980. In general, results indicated that the child's physical size, visual-motor development, family background, early life experience, and teacher philosophy were relatively unimportant determinants of whether or not the child emerged successfully from the repeated year. The best predictors of outcomes were children's initial status in three areas -- academic skills, emotional development, and social skills. Copies of teacher and parent interview forms, as well as the instrument used in observing classroom environments and curricula, are appended. (Author/MP)

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FINAL REPORT

Success in Nonpromoted First Grade Children

Grant PHS 28765-02

National Institute Mental Health

by

Jonathan Sandoval

G. Penee Hughes

PS012636

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June 1981
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Acknowledgments

We wish to gratefully acknowledge the participation of administrators, principals, and teachers from the following school districts. Their contributions and continued support were invaluable to the success of the project.

San Juan Unified School District
Carmichael, California

Catholic School Department
Diocese of Sacramento
Sacramento, California

Travis Unified School District
Travis Air Force Base
Travis, California

Vacaville Unified School District
Vacaville, California

Dixon Unified School District
Dixon, California

Winters Unified School District
Winters, California

INTRODUCTION

This project was designed to study the practice of requiring unsuccessful children to repeat the first grade. Although the intervention of nonpromotion is generally thought to be unsuccessful with most children, the practice continues to persist, probably because it is beneficial to a limited number of pupils. Regretably, little is known about the type of child who benefits from repeating a grade, the type of educational environment which facilitates the child's development, or the effects of the retention process upon the child's academic, social, or emotional development. This research effort was designed to investigate the complex problem of children who are required to repeat the first grade.

The project monitored 146 first grade children who were identified by their teachers in the Spring of 1979 as candidates for retention. Of the total group, 84 children remained in the first grade for the following school year and 62 were promoted to the second grade. All 144 children were individually tested, their parents and teachers were interviewed, and their classrooms were observed in both the Spring of 1979 and 1980. This document is the final report of the results obtained in the project, although secondary analysis of the data will continue.

Background

Nonpromotion has been a topic of research interest since the early 1900s. Despite over seventy-five years of study, little definitive information exists on the subject. Typically researchers have addressed retention in terms of its effect upon academic achievement and socio-emotional development. A discussion of the major works examining each of these outcomes follows.

Academic Achievement. Saunders (1941), reviewing the early research on

elementary school retention, stated:

> From the evidence cited it may be concluded that nonpromotion of pupils in elementary schools in order to assure mastery of subject matter does not often accomplish its objectives. Children do not appear to learn more by repeating a grade but experience less growth in subject matter achievement than they do when promoted (p. 29).

The majority of the research since the Second World War has supported the conclusion of Saunders' early review, i.e. that nonpromotion seldom has a salutary effect on achievement. Obtaining findings which reaffirmed Saunders' conclusion, Dobbs and Neville (1967) reported that nonpromotion was not an aid to achievement for 30 pairs of matched first graders. Reading and math achievement gains of the promoted group were significantly greater than the retained group over the two year study. Coffield and Blommers (1956) found that retained and promoted subjects (N=190) ultimately perform at about the same level when performance is measured in the same higher grade, in spite of the fact that the retained pupils each spent an additional year in reaching the higher grade. Abidin, Golladay, & Howerton (1971) cited continuing deterioration in both achievement and ability level through the sixth grade for a group of 85 retained first and second grade pupils.

As a subcomponent of academic achievement, researchers have also addressed the motivational aspects of nonpromotion. Research findings suggest that nonpromotion may be more of a deterrent than an impetus to acceptable achievement (Farley, Frey, Garland, 1933; Caswell, 1933). In addition, the threat of nonpromotion has not been found to be a motivating force as measured by achievement tests (Otto and Melby, 1935). Research suggests that the threat of nonpromotion is primarily effective for pupils who are in no real

danger of being retained (Kowitz and Armstrong, 1961).

However, nonpromotion has not been found to be universally detrimental to children's achievement. Although, in many of the investigations reviewed by Saunders (1941) it was clear that the majority of children did not earn higher grades or score higher on group achievement tests following nonpromotion, the evidence was not conclusive. In three of the studies reviewed, approximately one-third of the children demonstrated favorable academic gains during the retained year (Keyes 1911, Buckingham 1926, and McKinney 1928). Lobdell (1954) suggests that as many as 69% of retained pupils may be expected to make good or fair progress when careful and painstaking selection criteria are employed.

In essence, the effects of nonpromotion upon academic achievement have not been clearly established. Research studies indicating a lack of academic achievement during the retained year are not clear as to the nature of this negative influence (i.e., continued deterioration, no growth, or a slower rate of growth). In comparison, studies reporting favorable academic gains during the retained year are not consistent in indicating the percentage of children who benefit or the distinguishing characteristics of such children.

Social-Emotional. Inconsistencies reflected in the understanding of academic variables are also apparent in the research addressing the social-emotional effects of retention. The two main topics of study in these areas have dealt with the quality of peer relationships and the stability of emotional development.

In one of the first and most extensive studies addressing the social implications of retention, Sandin (1944) concluded that nonpromotion constituted a barrier to the development of positive peer relationships. According to Sandin, retained children did not generally receive the social

approval of their regularly promoted peers. In addition, they were rated less favorably by their teachers on personal and social characteristics. Similarly, Goodlad (1954) reported that "the picture of sociometric change over the school year was one of decline in desirable adjustment for the nonpromoted children and of improvement for promoted children" (p. 321). These findings parallel the research literature documenting the rejection of overage pupils by their classmates (Anfinson 1941; Bodoian 1954; Morrison and Perry 1956). However, the research literature is not in agreement as to the degree of rejection experienced by retained children at different age levels. Sandin (1944) suggested that first graders may suffer less social ostracism than do children in the upper grades. In comparison, Morrison and Perry (1956) noted that discrimination against overage children was most severe in grades 4, 5, and 6; and least marked in grades 7 and 8. In all events, the interactional effect of age and grade level does not appear to be clearly understood.

Negative effects noted for social relations have also been documented for emotional development. Caswell (1933) and Saunders (1941) both concluded that nonpromotion usually intensifies emotional instability. Caswell (1933) elaborated to state that nonpromotion often affects unfavorably the personality of children, "causing them to develop undesirable defense mechanisms against failure. Nonpromotion is a type of failure that tends to deaden, disillusion, and defeat the child" (p. 70). In a later review of the literature Heffernan (1952) expressed similar sentiments: "Nonpromotion is devastating to the personality of children. It deadens initiative, paralyzes the will to achieve, destroys the sense of security and acceptance in the family circle, and promotes truancy and delinquency" (p. 24).

Despite the negative social and emotional consequences outlined in the

preceding studies, research is not consistent. Anfinson (1941), in exploring the social and personality characteristics of junior high students, found that maladjustment was not directly associated with nonpromotion. Nonpromoted students were not considered a psychologically distinct group from their peers. Chase (1968) and Scott and Ames (1969) found no negative social or emotional effects for pupils whose retention was based primarily on immaturity. In addition, Finlayson (1977) reported that nonpromotion did not negatively influence self-concept as measured by self-concept scales, teachers' reports, and parents' reports. Reflecting even a stronger position, Worth (1960) reported that "the social-personal adjustment of retained low achievers appears to be as good, if not better, than it is when they are promoted" (p. 25).

In retrospect, the research is not in agreement as to the effects of nonpromotion upon a child's subsequent social and emotional development. Although one may speculate that the variables of age, grade level, and degree of immaturity may be critical factors influencing social-emotional adjustment, the research is not conclusive.

In summary, the effects of the retention process on academic and social-emotional variables have not been clearly established. As such, the plethora of existing research is inadequate for decision making. As Jackson (1975) pointed out after reviewing 44 studies: "...neither the few soundly designed studies nor the major portion of the inadequately designed studies suggest that grade retention is more beneficial for pupils having difficulties in school than (is) promotion to the subsequent grade" (p. 614). "...Thus, those educators who retain pupils in a grade do so without valid research evidence to indicate that such treatment will provide greater benefits to students with academic difficulties than will promotion to the next grade"

(p. 627). Jackson continues to stress: "This conclusion should not be interpreted to mean that promotion is better than retention but, rather, that the accumulated research is so poor that valid inferences cannot be drawn concerning the relative benefits of these two options" (p. 627).

The interpretation and generalizability of results indicated in the research is complicated by methodological problems. Common methodical problems include: a) variation in the age, grade, and ability level of children studied; b) variation in the degree and extent of retention e.g., repeating a course, a semester, or grade; c) frequent reliance upon the use of teacher and parent ratings as criteria for success to the exclusion of more objective measures; d) failure to control for and monitor academic interventions; and e) inconsistency in terminology e.g., variations in the definition of immaturity.

In addition to methodological problems, researchers have failed to employ a comprehensive design involving the systematic exploration of pupil, classroom, teacher, and parent variables. The present research will attempt to overcome the aforementioned problems in both methodology and design.

OBJECTIVES

The proposed research is designed to delineate the effects of the retention process upon a child's academic, social, and emotional development. The primary emphasis of the project is to identify characteristics of children who benefit from the retention process; and secondarily, to identify factors from the retained year that contribute to success during that retained year. The objectives include:

1. To establish the relationship of the pupil attributes
   a) intellectual functioning;
   b) cognitive development;
   c) level of achievement;
   d) perceptual-motor ability;
   e) self-concept;
   f) physical development;
   g) interpersonal relations;
   to success following the nonpromotion or promotion of children.
2. To establish the relationship of parental background attitudes and expectations to success following the nonpromotion or promotion of children.
3. To establish the relationship of teacher attitudes and classroom organizational strategies to success following the nonpromotion or promotion of children.

The proposed objectives were accomplished by monitoring a group of first grade pupils, considered by their schools to be candidates for retention, over a two year period. The intent was to study the retention process as it naturally occurs in the schools. No attempt was made to influence the retention decision or to make interventions during the repeated year.

The project was directed at pupils considered by school personnel for retention in the first grade. First grade pupils were chosen for two reasons: a) the first grade is typically considered the beginning of one's academic career; and b) the relationship of early school failure to mental health problems.

SUBJECTS

Year I: Six school districts from the Sacramento-Solano county area of Northern California, including the Catholic School Department of the Diocese of Sacramento, participated in the project. From the six cooperating districts, 37 elementary school and 53 first grade teachers agreed to participate. The number of schools and teachers who volunteered was roughly proportional to the size of the district. However, one school district located near a military installation contributed a larger portion of subjects than expected. Subjects were comprised of 146 children, out of a possible 180 children, who were considered for retention by participating teachers.

Year II: Of the 146 participating children 84 (57.5%) of the subjects were retained and 62 (42.5%) were promoted. The retention decision was contingent upon three variables: a) the opinion of the classroom teacher; b) the discretion of the school principal; and c) in the majority of the cases, parental consent. With few exceptions, children were not retained when parents strongly opposed the retention decision.

Of the original 146 subjects, 138 participated in the study both years. Eight students were lost due to family moves or parental request to discontinue. Of the remaining 138 children, 42 pupils changed schools; 32 moving to schools not previously participating in the project. During the second year 18 school districts, 66 schools, and 98 classroom teachers participated in the project.

Table 1 lists by sex the number of children participating from the three types of districts: Catholic, Public, and Public-Military. Sixty percent of the subjects were boys, which is fewer than would be expected on the basis of previous research.

Table 2 provides a breakdown of students by age. The subjects ranged in age from 6 years 4 months to 7 years 8 months, with an average age of 6 years 9 months at the time of the first data collection. Table 3 presents the ethnic group breakdown of the subjects by sex. Black and Hispanic children constituted approximately 25 percent of the subject population.

Table 4 displays a breakdown of family occupational level based upon the Hollingshead Index of Social Position (Hollingshead and Redlich, 1958). Occupational codes were determined for each adult in the household, with the lowest code designating the main breadwinner. Categories 1, 2, and 3 may be combined to yield upper middle class; categories 4 and 5 to yield lower middle class; and categories 6, 7, and 8 to yield a lower social class. By this system, 32.3% of the children were upper middle, 45.6% were lower middle and 20.5% were lower in socio-economic status (SES).

From the above data, it would appear that the subjects are generally representative of the first grade population and that no strong bias is operating in the selection of candidates for retention.

TABLE 1

Number of Subjects by Sex and District

District	Number of Schools	Female	Male	Total
Catholic	16	21 (44.7%)	26 (55.3%)	47
Public	19	31 (40.8%)	45 (59.2%	76
Public-Military	2	8 (34.8%)	15 (65.2%)	23
Totals	37	60	86	146

TABLE 2

Number of Subjects by Age

Age in years & months	Number of Subjects	Percentage of Sample
6.4	1	.7
6.5	3	2.1
6.6	12	8.2
6.7	12	8.2
6.8	15	10.3
6.9	20	13.7
6.10	19	13.0
6.11	12	8.2
7.0	9	6.2
7.1	8	5.5
7.2	7	4.8
7.3	7	4.8
7.4	7	4.8
7.5	5	3.4
7.6	4	2.7
7.7	3	2.1
7.8	2	1.4
Total	146	100

TABLE 3

Number of Subjects by Sex and Ethnic Background

	Female	Male		
Caucasian	36	61	97	66.4
Black	6	9	15	10.3
Hispanic	10	11	21	14.4
Other Minority	8	5	13	8.9
Asian, Portuguese, etc.			146	

TABLE 4

Bread-winner's Occupation in

Household of Subjects

Occupational Scale Category	Number of Subjects	Percent
1. Higher executives, proprietors of large concerns and major professionals	8	5.5
2. Business managers, proprietors of medium-sized businesses or lesser professionals	20	13.7
3. Administrative personnel, small independent businesses and minor professionals	19	13.0
4. Clerical and sales workers, technicians and owners of little businesses	44	30.1
5. Skilled manual employees	23	15.8
6. Machine operators and semi-skilled employees	18	12.3
7. Unskilled employees	10	6.8
8. Unemployed	2	1.4
9. Missing data	2	1.4

MEASURES

Direct Pupil Measures - Intellectual Functioning The Vocabulary (VOCABSS) and Block Design (BLODESSS) subtests of the Wechsler Intelligence Scale for Children - Revised (Wechsler, 1974) were used as the measure of intellectual functioning. These measures are verbal and nonverbal subtests of a standardized measure of intellectual functioning. Subtests correlate .73 and .74 with Full Scale I.Q. and have a reliability of .74 and .70 for children under eight years of age. The Vocabulary subtest is comprised of forty words which the child is asked to define. Words are presented in ascending order of difficulty and discontinued after five consecutive errors. Vocabulary is assumed to be a measure of learning ability, of verbal information, and of range of ideas influenced by a child's educational background and his/her cultural setting. The Block Design subtest measures the perception, analysis, and synthesis of abstract designs. The child is required to reproduce a series of geometric designs with three-dimensional colored blocks. Basic skills in visual-motor coordination are inherent in the task.

Direct Pupil Measures - Cognitive Development Our measures of cognitive development came from Piaget-derived tests of cognitive development authored by Read Tuddenham (1970). He has created a Battery of 4-6 subtests designed to measure cognitive reasoning skills acquired during the concrete operational stage of development (7-11 years). These cognitive strategies are believed to be necessary for the solving of school problems although they are not directly related to curriculum. Subtests assessed skills in:

1) Conservation or the ability to conserve mass despite variations in the shape of objects. Specific subtests were Conservation of Area (COA) and Conservation of Length (COL).

2) Spatial Relations or the effects of position, direction, and distance upon the perception of objects in space. Specific subtests were Water Level (WL) and Perspectives (PERS).

3) Logical Relations, which addresses principles of classification, reversibility, one to one correspondence, and whole-part relationships. Specific subtests were Linear and Circular Order (LCO) and Parts and Wholes (PAW).

Direct Pupil Measures - Reading Achievement We employed four tests of reading achievement: the Letter Sounds and Reading Comprehension subtests of the California Achievement Test (CTB/McGraw-Hill, 1977) and the Letter Recognition and Word Identification subtests of the Woodcock Reading Mastery Test (Woodcock, 1973). The Letter Recognition subtest (LETNRS) measures a pupil's ability to recognize Roman, cursive, and block letters. The Word Identification subtest (WRDRECRS) measures a pupil's ability to decode words. The child is asked to identify a series of increasingly difficult words starting with those typically found in beginning readers. Test items were selected from an analysis of vocabulary words introduced in basal reading programs. The Letter Sounds subtest (LETSORS) contains twenty-one items and requires a pupil to recognize sounds of initial short vowels, initial long vowels, and initial single consonants. The examiner identifies a picture and asks the child to identify the lower case letter that represents the initial sound of the word (Form 10C). The Reading Comprehension subtest (RCOMPRS) requires the pupil to read a series of short paragraphs and answer written questions involving factual information and simple inferences. Twenty items were contained on each level of the test used in the project (Form 11C and 12C).

Direct Pupil Measures - Mathematics To assess learning in the area of mathematics, we used the Key Math Diagnostic Arithmetic Test (Connolly, Nachtman, and Pritchett, 1976). The Key Math is an individually administered arithmetic test designed to provide a comprehensive assessment of numerical skills in the areas of content, operations, and applications. Six of the fourteen subtests were administered in the project, two in each of the aforementioned areas. The sum of these subtests was designated TOTKEYM. Subtests and their reliabilities for a first grade population included:

1) Numeration: Involves identification of quantification of quantity and set value the recognition of numerals; the rounding of numbers; the use of integers, and the identification of missing numbers in multiple units (r=.72).

2) Geometry and Symbols: Involves recognition of geometric shapes, arithmetic symbols, and common arithmetic abbreviations (r=.69).

3-4) Addition and Subtraction: Assesses skills in computation starting with single and digits without regrouping and continuing through fractions (r=.77 and .70 respectively).

5) Word Problems: Assesses calculation skills in the form of story problems. Format is designed to be independent of reading ability (r = .67).

6) Time: Explores basic time concepts such as reading a clock, identifying time intervals, and the use of a calendar.

Direct Pupil measures - Perceptual-Motor Functioning To assess this theoretically interesting area of immaturity we used the Developmental Test of Visual-Motor Integration (VMIRS) (Beery, 1967). This test is a standardized measure of the developmental level of visual-perceptual and fine motor skills for pupils two to fifteen years of age. The pupil is asked to copy a series

of twenty-four increasing complex geometric designs. The correlation between visual motor integration scores and chronological age is .89 for the two to fifteen year age range. Visual motor integration correlations are higher with mental age than with chronological age. Correlations with mental age and chronological age are higher in first grade than in older children.

Direct pupil Measures - Affective-Social Development This important area of functioning was assessed by the McDaniel-Piers Young Children's Self-Concept Scale (McDaniel, 1973) and Pupil Behavior Rating Scale (Lambert, Bower, and Hartsough, 1979). A standardized measure of self-concept, the McDaniel-Piers consists of three scale scores: Feeling Self, School Self, and Behaving Self along with a total score (TOTSC). The scale is presented in questionnaire format with forty items to be read aloud by the test administrator. The child responds either "yes" or "no" on a special answer sheet. The scale is a downward extension of the Piers-Harris Self-Concept Scale, with item selection being based upon factor analysis. Norms for the total score are based on over two thousand children from seven metropolitan school systems.

The Pupil Behavior Rating Scale (PBRS) is a teacher rating scale consisting of eleven attributes which can be reduced to three factors: classroom adaptation (PADAPT), interpersonal skills (PINTER), and intrapersonal behavior (PINTRA). Interrater-reliability coefficients range from .74 - .91. Test-retest reliabilities range from .71 - .83.

Direct Pupil Measures - Height and Weight The child's height and weight were recorded in accordance with methods described in a standard text for pediatricians (Tanner, 1973). The same source yielded normative data for these measures.

Teacher Orientation and Classroom Environment Teachers were observed and asked to rate themselves on the Walberg and Thomas Open Education Rating Scale

(Walberg and Thomas, 1972). This instrument may be used either as an observational scale (OBTOT) or a self rating scale (WALTOT). It is comprised of fifty items designed to assess open versus traditional orientation to classroom instruction. The items may be broken down into eight areas: instruction, provisioning, diagnosis, humaneness, evaluation, seeking, self-perception, and assumptions. The themes represented by each of these eight areas were validated with the literature, recognized authorities, and observations in British and American classrooms. The reliability of the scale is reported to be .95 whether obtained through questionnaire or observation. The teachers completed the Questionnaire form of the Walberg and Thomas Scale.

To learn more about the teacher's view of their educational philosophy, they also completed a questionnaire designed by the first author (see Appendix A). This questionnaire, called the Curriculum and Environment Survey, contains twelve items addressing a teacher's philosophical orientation to teaching and theoretical ideas. It yields three scores: traditionally child centered orientation (TOTOT), curriculum-centered orientation (COTOT), and developmentally centered orientation (DOTOT). These scales have alpha internal consistency reliabilities of .62, .70, and .76, respectively.

Teacher Perceptions of Pupil We assessed the teachers perception of the pupil by two means: Light's Retention Scale (Light, 1977) and by a teacher interview (Appendix B and C). Light's scale is a recently published measure designed to assist school personnel in deciding whether a pupil should be retained. The scale is comprised of 19 evaluation categories on which the pupil is assigned a numerical rating of one to five. Formulation of these categories was based upon a review of the literature. Reliability, validity, and normative data were not provided in the manual. The research done in the project on this measure has been reported elsewhere (Sandoval, 1980).

The two teacher interviews were devised specially for this project. In the first year the project questionnaire was designed to obtain background information on the pupil's level of achievement, reasons for considering retention, interventions attempted during the school year, the teacher's attitudes, and the teacher's perception of the parent's and child's attitudes. The second year follow-up interview was designed to determine the extent of background information provided the teacher at the beginning of the school year, the child's level of academic, emotional, and social functioning, the composition of the school day, attitudes held by the teacher, and the teacher's perception of the parents' and child's attitudes.

Parent Attitudes and Home Variables Two interviews were created to learn about the parent attitudes and background during the initial first grade, and during the repeated grade. The interview questions may be inspected in the Appendix (D and E). The first-year project designed interview consisted of seven sections: achievement, attitude and involvement with school, attitude toward nonpromotion or possibility of nonpromotion: description of the child, home environment, family background information, and health and developmental history. The follow-up interview contained questions in the following areas: attitude and involvement with school, attitude regarding nonpromotion in retrospect, changes in the child, and school programs the child had received.

PROCEDURE

The project covered a time period of approximately eighteen months, which can be divided into four phases.

Spring 1979: Initial identification by the school of pupils being considered for retention. Explanation of the project to parents and completion of consent forms. Initial assessment of pupils, completion of teacher interviews, and classroom observations.

Summer 1979: Initial parent interviews.

Spring 1980: Second assessment of pupils, teacher interviews, and classroom observations.

Summer 1980: Second parent interview.

In March and April of 1979, cooperating teachers identified children in their classrooms they believed might benefit from repeating the first grade. The possibility of retention was then discussed with the parents during routine conferences. At this time, parents were informed of the research project and permission was requested to release their name to a member of the research staff. Of the 180 parents approached, 155 agreed to have their names released to the project investigator. When contacted by telephone or in person by the project investigator, 146 agreed to allow their children to participate.

Subjects were tested individually in the schools during the Spring of 1979 and 1980. The testing battery was approximately two hours long and was completed in one to two sessions, depending upon the attention span of the child and the constraints of the school day. Academic and nonacademic assessment measures were alternated to maximize attentional and motivational factors.

The core of the pupil assessment battery remained the same both years with four modifications: 1) the deletion of the Letter Name and Letter Sounds subtests from the reading battery when item mastery had been demonstrated the first year; 2) the addition of an upper level reading comprehension subtest to assure an appropriate ceiling level; 3) the deletion of Piagetian subtests when concept mastery had been demonstrated the first year; and 4) the deletion of the Block Design and Vocabulary subtests of the WISC-R when a scale score of nine or higher was attained the first year.

Observations of the classroom environment were made concomitant with pupil assessment in the Spring of 1979 and 1980. Classrooms were observed across subject areas for a minimum time period of one hour. In addition to the Walberg and Thomas Observation Scale, the observers at this time drew a map depicting the physical layout of the classroom and the proximity of the project child to instructional areas.

Teacher interviews were conducted in both the Spring of 1979 and 1980. The length of the interview was approximately 15-20 minutes per project child. Subsequent to the first year interview, teachers were asked to complete the Pupil Behavior Rating Scale, Light's Retention Scale, and questionnaires addressing their philosophy of teaching. Modifications between the first and second year included: 1) the completion of the Pupil Behavior Rating Scale during the interview time; 2) the deletion of the Light's Retention Scale; and 3) the completion of the teacher philosophy forms prior to the second interview. Teachers who participated in the project both years were not asked to complete the teacher philosophy forms (Walberg and Thomas, Curriculum and Environment Survey) the second year.

Parents were interviewed in both the Summer of 1979 and 1980. Initial interviews (1979) were conducted in the home and were of approximately one hour duration. The decision to have one or both parents participate in the interview was left up to the discretion of the individual family. The second interview was conducted by phone during the Summer of 1980. The average length of the phone interviews ranged from 15 to 20 minutes.

Staff and training. All testing and data collection was completed by graduate students in Education and Child Development. Training occured prior to each of the major phases of data collection. Eight research assistants were trained for the first phase of the data collection. The training program

covered a four to six week period involving forty hours of instruction and practice time. The training program for the second phase of the project, the parent interviews, covered a ten hour period. The individual competencies of the research assistants was verified by the project coordinator prior to each phase of data collection. A similar training format was followed during the second year. Four of eight research assistants remained the same for both years of the project.

A Spanish speaking research assistant was included on the project staff. This individual remained on the staff for both years to assure consistency of translations and interpretations.

Validation of scoring. During both years of the project the scoring of all assessment, interview, and observational measures was verified by the project coordinator and a graduate assistant.

RESULTS

Description of those retained and those promoted.

The subjects for this study were all candidates to repeat the first grade in the late winter or early spring of 1979. Ultimately 78 children repeated the first grade, 61 were promoted or placed in special education and nine were lost to the project. Table 5 presents the summary statistics of the two groups remaining in the project who had complete data on the various pupil measures. When multivariate analysis of variance is applied to the statistics of Table 5, the following differences are significant at $P \leq .05$: Letter Names, Word Recognition, Reading Comprehension, Key Mathematics, Linear and Circular Order and the teacher rating of adaptation on the PBRS. The two groups differed with respect to achievement, cognitive development, as measured by Linear and Circular Order, and in adaptation to school.

Table 6 repeats some of the same information for the two groups and

compares the groups to the "average" first grade student at the year's end. It contains the means and standard deviation for the Reading and VMI scores in converted (non-raw) score units and lists some normative data for other measures. From the table it is clear that both the retained and promoted candidates were below average in word recognition and reading comprehension, but were not uniformly so as reflected by the large standard deviation. They were a year below age on the VMI. Both groups are of average height and weight and were in the average range on the IQ measures, although a bit below the mean. The groups were less well adjusted rated by the PBRS, particularly on the adaptation measure where retained groups were more than one standard deviation from the mean (high score = maladjustment). Test defined problem areas for these children who were candidates to repeat were academic skills, visual motor integration, and adaptation to the classroom demands.

TABLE 5

Summary Statistics for Retained and Promoted Children

	Retained			Promoted		
	X	SD	N	X	SD	N
Age	82.73	4.10	67	82.66	3.14	47
LETNRS*	29.61	6.80		32.02	2.34	
WRDRECRS*	23.27	19.35		30.15	16.15	
RCOMPRS*	5.54	3.61		7.17	3.25	
TOTKEYM*	39.37	5.97		42.89	5.68	
VMIRS	11.30	1.54		11.5	1.68	
Height	47.32	2.04		47.43	2.64	
Weight	50.19	6.38		51.63	9.31	
TOTSC	26.88	7 22		27.74	5.90	
LCO*	2.13	.83		2.77	.81	
COA	.85	1.20		1.13	1.31	
WL	3.79	1.95		3.68	1.83	
BLODESSS	9.40	2.61		9.53	2.90	
VOCABSS	8.93	3.00		9.64	2.33	
PADAPT*	7.95	1.55		7.05	1.81	
PINTER	4.39	1.55		4.33	1.67	
PINTRA	5.52	1.95		5.00	1.74	

*$p \geq .05$

TABLE 6

Means and Standard Deviations of Retained and Promoted First Grade Children in Non-Raw Score Form and Normative Data on Measures Used

	Retained		Promoted		Norm First Grade	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Letter Names Percentile	59.75	22.60	69.02	14.64	50	
Word Recognition Percentile	29.30	26.74	39.91	24.35	50	
Reading Comprehension Percentile	14.30	18.14	21.57	22.14	50	
Visual Motor Integgration Age Equivlent	5.77	.65	5.86	.85*	6.89	.31
Height	47.32	2.04	47.43	2.64	47.48**	2.15
Weight	50.19	6.38	51.63	9.31	49.72	7.68
Block Design	9.40	2.61	9.53	2.90	10.00	2.00
Vocabulary	8.93	3.00	9.64	2.33	10.00	2.00
Classroom Adaptation	7.95	1.55	7.05	1.81	4.84	2.66
Interpersonal Behavior	4.39	1.55	4.33	1.67	3.66	1.92
Intrapersonal Behavior Adjustment	5.52	1.95	5.00	1.74	4.12	2.12

* Sample average chronological age

** (Tanner, 1973)

Because the means of the Letter Names test are above average and this skill seems to have been mastered by most children, this subtest will be dropped from the analysis henceforth.

Data Reduction of Predictors - Pupil Measures of Immaturity

Pupil measures - stability. The first task in examining which of the various pupil measures could be used as predictors and which could be combined was to determine the long term stability or reliability of the pupil measures. The scores obtained in 1979 were correlated with those obtained in 1980. Table 7 presents these stability coefficients.

All of the coefficients are significant. However, VMI, self-concept, and Pupil Behavior Rating Scores are less stable than other measures. High stability means that any changes that are taking place are occurring in the same direction for all pupils. Low stability in the area of self concept and Pupil Behavior Rating could mean that some children (e.g. those retained) changed in these areas whereas others did not. All measures except Letter Names may be used in the analysis, but, since the subtests of the Piers-Harris Self concept measure have lower stability coefficients than the total, only the total score was used. The subtests School Self, Behaving Self, and Feeling Self correlate with Total Self-Concept .62, .86, and .80, respectively.

Pupil measures - factor analysis. The next step in the reduction of the pupil test and rating measures was to perform a factor analysis of them to determine which are redundant and may be combined. This procedure also yields information about the validity of the selection of the measures. Measures intended to assess a given area such as reading should factor together.

TABLE 7

One Year Stability of Pupil Test Measures

Given in 1979 and 1980

	r	P	N
Word Recognition Raw Score	.76	.001	137
Reading Comprehension Raw Score	.58	.001	137
Key Math Total Raw Score	.78	.001	136
Visual Motor Integration Raw Score	.46	.001	137
Height	.77	.001	134
Weight	.92	.001	51*
Total Self Concept	.31	.001	136
School Self	.25	.001	137
Behaving Self	.30	.001	136
Feeling Self	.16	.001	136
PBRS Total	.32	.001	116
Classroom Adaptation	.24	.004	124
Interpersonal behavior	.62	.001	127
Intrapersonal behavior	.23	.006	120

*Collected on subsample as convenient during second year.

All of the pupil measures collected were factor analyzed using the Factor Program of SPSS to yield a principal component factor analysis with iteration and verimax rotation. Table 8 presents the results of this factor analysis.

The first four factors have eigenvalues greater than one and may be interpreted. The first factor appears to reflect reading ability (loadings greater than .40) and loads weakly on mathematics and vocabulary. The second factor contains the measures of adjustment from the PBRS and may be considered an adjustment factor. The third factor appears to be a measure of physical size, with high loadings on height and weight. The fourth factor, has contributions from Block Design, the Water Level task, the VMI and, to a much smaller extent, from the linear and Circular Order task. This factor has a visual component and a cognitive development component. The fifth factor has loadings from Key Math and Vocabulary and may reflect mathematics ability or ability in general. It is worth noting that on the WISC-R, the Arithmetic subtest is combined with the Vocabulary subtest on the Verbal scale. The cognitive development tests and reading tests are weakly related to factor four.

Further Reduction of Pupil Measures

From Table 8 it would appear that the reading scores are highly related ($r = .836$), height and weight are related ($r = .757$), and that the PBRS and McDaniels-Piers self-concepts totals may be used. Since, however, the PBRS was used primarily to primarily to obtain a rating of social relations, the Interpersonal Behavior score will be retained. It is correlated .48 with Classroom Adaptation and .35 with Interpersonal behavior in this sample, and it probably

TABLE 8

Principal Component Analysis of Child Measures of Immaturity

Factor	I	II	III	IV	V
Eigenvalue	3.23	2.16	1.64	1.54	1.06
Percent of Variance	21.60	14.40	10.90	10.30	7.10
Word Recognition	92	-07	-07	-04	09
Reading Comprehension	89	-11	02	13	12
Mathematics	49	-12	03	18	66
Visual Motor Interpretation	-11	-26	03	62	15
Height	-05	06	93	04	-04
Weight	00	12	93	-12	-00
Self-Concept	06	-12	-14	10	48
Linear and Circular Order	10	-17	16	48	17
Conservation of Area	-03	02	08	11	66
Water Level	-07	06	-21	66	18
Block Design	25	11	-07	79	-13
Vocabulary	47	28	-01	-02	57
Classroom Adaptation	-27	78	02	-17	-21
Interpersonal Behavior	-03	75	13	-05	28
Intrapersonal Behavior	05	77	06	-00	-13

Note. Numbers in this table and others are rounded to two places and decimal point dropped.

stands alone because of its theoretical independence.

A new variable combining word recognition and reading comprehension was obtained by adding the percentile scores for the two tests. When this is done, the resultant score called reading is correlated .95 with word recognition raw score, .90 with reading comprehension raw score, and .39 with Letter Names raw score. The moderate correlation with Letter Names reflects the relatively easy nature of this test and the fact it measures only a limited aspect of reading.

A new variable, SIZE, can be created by converting both height and weight estimates to Z scores, then adding these standard scores together. When this is done, the new variable, size, correlates .93 with height and .93 with weight.

The results from the Piaget tests may also be combined. A new variable PIAGET task may be created by adding together the total scores on Linear and Circular Order on Water Level and Conservation of Area. This new variable correlates .56 with Linear and Circular Order, .80 with Water Level, and .38 with Conservation of Area.

The pupil predictors have been reduced then to nine variables. These variables may be again factor analyzed to test if they are truly independent. Table 9 presents the results of this test of further data reduction. Only one factor, achievement-vocabulary is significant. The other measures are independent. The second (minor) factor is the visual-performance cognitive development measure. The final (minor) factor seems to be interpersonal behavior. Size and self-concept do not load significantly on any of the factors. The data reduction can stop at this point, because of the lack of differentiation of the variables. Table 10 presents the predictor variables derived from the various measures of pupil immaturity.

TABLE 9

Final Principal Component Analysis of

Child Immaturity Predictor Variables

Factor	Factor 1	Factor 2	Factor 3
Eigenvalue	1.87	.93	.47
Percent of Variance	53.7	28.4	14.3
Reading	61	07	-20
Math	66	38	16
VMI	04	50	-16
Size	-07	15	34
Total Self-Concept	29	20	-14
Piaget	18	59	07
Block Design	11	47	-07
Vocabulary	70	04	48
Interpersonal Behavior	04	11	58

TABLE 10

Predictor Variables from Measures of Pupil Immaturity

Predictor Variables	Abbreviation	Number of Scores
Reading	READING	2
Mathematics	TOTKEYM	6
Visual Motor Integration	VMI	1
Size	SIZE	2
Total Self-Concept	TOTSC	1
Rating of Interpersonal Competence	PINTER	3
Vocabulary	VOCABSS	1
Block Design	BLODESSS	1
Piagetian development	PIAGET	3

Data Reduction of Predictors - Teacher Interview

At the time of initial testing, in the Spring of 1979, we interviewed the teachers to learn why the child had been considered for retention, their opinion as to whether or not the child would someday need special education, how confident they were that retaining the child would be successful, how involved or cooperative in general the parents had been with the school, how the child was reacting to the retention decision, and the teacher's estimate of the quality of the teacher-pupil relationship. Teachers also estimated the pupil's academic skills.

We asked the teachers to rate the extent to which each of the following contributed to the retention decision: poor social skills, poor motor skills, immature language development, bilingualism, poor work habits, behavior problems, emotional unreadiness, poor attendance, insufficient progress in writing, and low mental ability. When these items from the interview were factor analyzed, four factors emerged: a social and emotional factor (Factor 1), an academic skills factor (Factor 2), a language development factor (Factor 3) and an attendance-motor development factor which was reflected on Factor 4. The reader is directed to Table 11 for details.

When the three items related to social and affective considerations are combined, and when the three items related to academic problems are combined, the resulting scales have Cronbach Alpha reliabilities of .77 and .72, respectively.

The remaining reason for retention — frequent absences — has a single item. Nevertheless, it remains distinct in the analysis and for that reason will be retained as a predictor.

After an examination of the distribution of the responses to the teacher questions, those remaining questions with a reasonable variety of responses

TABLE 11

Principal Component Analysis of Reasons for Retention

Factor	I	II	III	IV
Eigenvalue	2.88	1.62	1.33	1.15
Percent of Variance	24.00	13.50	11.10	9.60
Social Problems	80	-15	25	04
Motor Problems	47	-18	31	51
Language Development Problems	14	03	71	27
Problems Learning English	-36	17	63	-18
Poor Work Habits	60	43	-17	-05
Behavioral Problems	75	08	12	-07
Emotional Immaturity	67	07	-00	07
Attendance Problems	24	-03	17	-71
Reading Problems	-14	78	12	03
Math Problems	19	73	04	12
Writing Problems	19	35	16	63
Low Mental Ability	27	03	61	08

were subjected to Principal Component Analysis. The question related to number of meetings with parents was discarded and the child's reaction was recoded to remove those cases from the analysis in which the child had not been told. The Principal Component Analysis results make up Table 12.

From this analysis, it appears that the child's reaction to retention will be a useful variable (Factor III). The parent attitude and involvement are also possible items (Factor II), (these two items correlated .20) as well as the teacher-pupil relationship and teacher's willingness to have the child again (these two items correlated .37) (Factor I). Items reflected on the first factor are the teacher's views on retention and the rating of success. These two items are not significantly correlated with each other and may be kept independent. Inasmuch as we have information about parental attitude and involvement from the parents, at some point in the analysis these variables may be eliminated.

The resulting teacher interview variables have been listed in Table 13. In addition to listing the above variables, a last teacher variable was added by determining whether or not the child had the same teacher for the retained year. This was recorded as a simple dichotomous yes or no.

TABLE 12

Principal Component Analysis of Teacher Questionnaire

Factor	I	II	III
Eigenvalue	1.80	1.33	1.03
Percent of Variance	25.70	19.00	14.80
Teacher's views on retention	-56	-17	10
Teacher's rating of success of nonpromotion	-67	42	16
Parent attitude toward retention	13	77	11
Parent involvement in school	12	64	-43
Child's reaction to retention	03	-03	88
Pupil Teacher relationship	69	17	12
Willingness to have child again	66	11	44

TABLE 13

Teacher Interview Variables

Predictor Variables	Abbreviation	Number of Scores
Extent to which academic problems were a reason	ACADRE	3
Extent to which Retention for social/affective problems were a reason	SOCAFF	3
Extent to which absences were a reason	ATTENDP	1
Teacher philosophy (views) on retention	VIEWS	1
Teacher's estimate of success of retention	SUCCESSP	1
*Parent attitude	PARATT	1
*Parent involvement in school	PINV	1
*Child's reaction to decision	REACTION	1
Pupil-teacher relationship(rapport)	CTREL	1
Teacher's willingness to have child again	AGAIN	1
Whether or not the child had the same teacher the second year	SAMETEAC	1

*Note. Information from other sources will be considered also.

Data reduction of predictors - The Parent Interview

During the summer of 1979, between the initial first grade and the repeated first grade (or second grade for those promoted) we interviewed the parents of the subjects to learn about the following factors we believed may be related to selecting a child for retention: the child's previous school history, parental expectations, the child's temperament, the family stability, the existence of traumatic events prior to the first grade, the existence of traumatic events during the first grade, the parent's attitude and involvement with school, the child's attitude about repeating the grade, the history of retention in the family, and the time the child spends with parents. We also collected demographic information concerning the family's ethnic/racial background, socioeconomic status, languages spoken in the home, and marital status. We also conducted a follow-up parent interview during the summer of 1980, asking at that time about family disruptions during the previous year, among other things.

Early Learning, Parental Expectations, and Early Physical Development The first step in the data analysis of the parent interview was to submit the range of variables of interest to a principal component analysis. Since the interview had generated a large number of variables, we decided to proceed with subgroups based on topics within the interview. When we place all of the items related to the child's preschool attendance, learning of academic skills prior to first grade, parental expectations, parental satisfaction with school, child's reaction to the retention decision, early health and development, and time spent with parents in the first analysis, four factors emerge (Table 14). The first factor contains questions related to parents' reported involvement with and emotional investment with their child's academic progress and with the child's health and development. The second factor

contains items related to the child's learning prior to first grade plus his or her attitude toward retention. The third factor contains items related to the amount of time parents spend individually with their child, and the last factor is related to the parent's satisfaction with the school.

These results suggest that 12 scales can be constructed from the questions related to early learning prior to first grade and to parental academic expectations and involvement (See Table 16). Health and development questions might also be combined into a scale. Because of high correlations and logical consistency, items related to happiness with the school (#1) and with the individual time the parents spend with the children (#2) may be combined into two item scales. Single items related to the child's preschool experience (#3), and the question related to the child's attitude toward promotion (#4) may stand alone. The item parent's satisfaction with teacher may be dropped because of its relationship with the general factor.

The constructed Prior Learning scale, consisting of items with loadings above .60, has a Cronbach's alpha reliability of .39; the proposed Parental Expectations and Involvement scale, consisting of items from the first factor, has a reliability of 39; the proposed Childhood Health and Development scale consisting of first factor items, has a reliability of .24. These scales do not have sufficient internal consistency to be used, so a single variable from each set will be chosen. We have elected to keep the questions "How much schooling would you like your child to have?" (#5), "Did your child write his ABC's prior to first grade?" (#6), and "Was your child's early development on schedule?" (#7). These variables had good frequency distributions, appeared in the factor structure in an appropriate way, and have theoretical interest.

Child Temperament When the questions related to the child's temperament were next subjected to principal component analysis, three factors emerge.

TABLE 14

Principal Components Analysis of Items from Parent Interview

Factor	I	II	III	IV
Eigenvalue	7.54	1.69	1.51	1.32
Percent of Variance	34.3	7.7	6.8	6.0
Preschool experience	40	11	05	38
Learn ABCs prior to first	13	79	13	15
Writes ABCs	26	73	18	15
Learns Colors	09	68	22	20
Counts	33	42	44	31
Prints	09	68	19	04
Parental Expectations for progress	57	09	17	14
Parental Expectation that child will need special help	53	38	14	45
Parental expectation that child will need help next year	47	36	11	05
Parent's academic ambitions for child	66	01	23	28
Parental satisfaction with classroom type	09	17	-03	75
Parental satisfaction with teacher	02	03	39	77
Parental expectation different teacher would be better	68	35	-08	-30
Child's attitude toward nonpromotion	27	56	-07	-08
Child's general health	42	10	-07	46
Child's health in last year	58	37	14	21
Child's early development	40	36	13	25

TABLE 14 (Cont'd.)

Accidents	63	33	01	15
M Time - Individual time spent with mother	24	25	81	08
F Time - Individual time spent with father	12	18	78	07
Time spent reading to child	54	10	38	00
Time spent with child on homework	66	10	45	06

Table 15 presents these results. Factor I and Factor II are highly related--correlate highly--suggesting two scales of temperament may be constructed: one combining adaptability, moodiness, and popularity--a social factor--and one combining the remainder--an assertiveness factor. The two scales thus composed have a Cronbach's alpha reliability of .433 and .533 respectively. A total score of all nine ratings has a Cronbach's alpha reliability of .508. This <u>total temperament</u> rating (#8) has sufficient reliability (barely) to be used, and will thus serve to mirror the child's basic disposition.

TABLE 15

Principal Component Analysis of Parent Ratings of Temperament

	Factor 1	Factor 2	Factor 3
Eigenvalue	1.87	1.48	1.08
Percent of Variance	20.80	16.40	12.00
Cooperation	47	22	14
Independence	07	69	03
Initiative	78	13	-04
Persistance	-15	75	13
Distractability	28	51	-13
Adaptability	23	04	64
Moodiness	-16	10	75
Popularity/Sociability	45	-18	63
Activity Level	52	-28	18

Parental Relations With School, Support of Decision, and Family Tradition of Retention Additional scales may be constructed from other parent interview questions. A measure of parent involvement in school can be constructed by adding whether or not the parent had volunteered as an aide, as a PTA member, to help with special functions, to help raise funds for the school, as a chaperon for field trips, or as a volunteer in other capacities. A scale constructed by combining these voluntary activities called Involvement with School (#9) has a reliability coefficient of .74 and will be used as a predictor.

A variable contact with first grade teacher can be calculated from the number of times the parent reported discussing with the teacher the child's general academic progress, specific academic difficulties, behavior problems, physical problems, special class placement, or other meetings. The scale, Parental Discussions (#10), made up of the sum of the number of these meetings has a reasonable distribution and will be used as another predictor.

The parents were also asked to what extent they and their spouse agreed to the decision to have their child repeat the first grade. The parents ratings correlated .76 ($N=127$, $P \leq .001$). The answers to the question on the part of the mother, Mother's Support (#11) will also be used as a predictor.

A variable family retention (#12) can be computed by adding together whether or not the mother, father, siblings or others in the family had been retained (2 points), considered for retention (1 point), or not considered (0 points). Since these events are not measuring an individual, the simple sum may be used with no expectation of internal consistency. The variable created by this sum was an appropriate distribution to be used as a predictor.

Table 16 contains the parent/child variables at this stage. When these variables are once again subjected to principal component analysis, the

TABLE 16

Parent Interview Variables

Retention Related Variables	Number of Questions
1. Parental happiness with school	2
2. Time parents report spending with child	2
3. Preschool attendance	1
4. *Child's attitude toward retention	1
5. Parental ambitions for child's schooling	1
6. Wrote ABCs	1
7. Child's early development	1
8. Child's temperament	9
9. *Parental voluntary involvement with school	7
10. Parental discussions with teacher about child	6
11. *Mother's support of retention	1
12. Retention in family	4

* Teacher's rating of this variable also retained as a predictor variable. The teacher's estimates differed from the parent, however. They correlated .25 with respect to parental support of retention; .42 with respect to parent involvement in the school; but did not agree at all (r = .14) about the child's attitude.

analysis, the results in Table 17 are obtained. From the table, the six factors account for 66.6% of the variance and only one factor, Factor 3, has more than three items with large loadings. These 12 variables may be considered to be relatively independent.

Traumatic Events The variable stress or traumatic events can be created by adding whether or not there had been recent traumatic illness in the family, a recent death in the family, a new member coming into the family (sibling or step parent), a member leaving the family or parental disharmony. This variable was taken from the parent interviews of both the first year and the second year. Three single variables, Stress prior to first grade, Stress during first grade, and Stress during the retained grade were rated by the interviewers on a 5 point scale. No simple addition of variables could weigh the severity of events occuring to the child so interviewer integration and judgment was used.

TABLE 17

Principal Component Analysis of Parent Interview Variables

Factor	I	II	III	IV	V	VI
Eigenvalue	1.75	1.67	1.32	1.16	1.06	1.04
Percent of Expl. Variance	14.5	13.9	11.0	9.6	8.8	8.7
Preschool	13	-19	-16	83	14	-03
Writes ABCs	19	69	-08	06	-10	-13
Ambitions	-08	16	-01	13	-24	69
Satisfaction with School	51	-17	-11	-08	27	58
Mother's support of retention	80	09	08	-15	-04	09
Involvement with School	20	22	03	73	-16	14
Meetings with School	08	19	-68	16	11	02
Time spent with Child	01	-20	62	-02	29	32
Early developmental pace	02	-79	04	-06	-12	-23
Child's attitude toward retention	-77	-10	01	-11	08	11
Temperament	15	25	70	06	-00	-25
Retention in family	-08	04	02	00	91	-11

From the parent interviews, we also determined demographic information. We inquired about parental occupations, the highest educational level attained by the parents, the structure of the family (marital status, size of family, adults in home), the age of the parents, the ethnic/racial background of the parents and the languages spoken in the home. These variables all may have a bearing on the child's educational career, but we elected to use the occupational status of the breadwinner as the measure of socio-economic status, the ethnicity of the family (scored white =1, minority = 0), the sex and age of the pupil, and the mother's age as predictors from this group.

In all, we reduced the information from the parent interview down into twenty variables. These variables, along with abbreviations, are listed in Table 18.

Data Reduction of Predictors-Classroom Environment Measures

Three measures were taken of the classroom environment. Teachers completed the Walberg and Thomas Open Education Survey and the Curriculum and Environment Survey. Observers completed the rating of Provisioning for Instruction and the Instructional subscales of the Walberg and Thomas Observation Rating Scale. When the subtotals of all the instruments were subjected to factor analysis, the results reproduced Table 19, and suggest three factors. The Walberg and Thomas scores factor together with the Developmental and Child-Oriented scores from the Curriculum and Environment Survey. The observer's scores are a separate factor and the Traditionally Oriented score of the CES is yet another independent dimension. As a result, we are justified in using the total score from the Walberg and Thomas Open Education Survey, the total score of the Observers version of the Walberg and Thomas Survey, and the Child-Oriented-Traditional score of the CES. Table 20 presents the predictors from the measures of classroom environment that will be used in the analysis.

TABLE 18

Parent Interview Variables

Predictor Variables	Abbreviation	# of Questions
Parental happiness with school	UNHAPS	2
Time parents report spending with child	PTIME	2
Preschool attendance	PRESCH	1
*Child's attitude toward retention	CHATT	1
Parental ambitions for child's schooling	AMB	1
Wrote ABCs before first grade	WABCS	1
Child's early development	EARDEV	1
Child's temperament	TEMPER	9
*Parental voluntary involvement with school	INVSCH	7
Parental discussions with teacher about child	DISCUST	6
Mother's support of retention	DCM	1
Retention in family	BIOR	4
Early traumatic or stressful events	STRESSE	1
Stress during initial first grade	STRESS79	1
Stress during repeated first grade	STRESS80	1
Socio-economic status(breadwinner's occup.)	BWOCC	4
Ethnic Background	ETHNIC	1
Sex of pupil	PUPILSEX	1
Age of pupil	AGE1	1
Age of mother	MAGE	1

* Information on these variables also obtained from teachers

TABLE 19

Principal Component Analysis of Classroom Measures

	Factor I	Factor II	Factor III
Eigenvalue	8.40	1.43	1.08
Percent of Variance	64.60	11.00	8.30
From Walberg and Thomas Scales			
Observer Provisions for Instruction	26	71	-06
Observer Instruction	17	85	03
Provisioning	91	31	09
Humaneness	93	20	09
Diagnosis	87	19	08
Instruction	91	24	13
Evaluation	91	14	07
Seek	87	23	06
Assumption	91	12	17
Self Perception	77	31	23
From Curriculum and Environment Survey			
Child Oriented	23	-00	86
Curriculum Oriented	57	24	-35
Developmental Oriented	81	24	04

Note. This table is bound to be inaccurate because the assumption of independence of observations was violated; some subjects had the same teacher. Nevertheless, the analysis will serve for data reduction.

TABLE 20

Predictors from Classroom Environment Measures

Predictor Variables	Abbrevation	Number of Items
Walberg and Thomas Open Education Survey Total Score	OBTOT	50
Walberg and Thomas Open Education Observation Scale Total of Provisions and Instruction Subscales	WALTOT	29
Child-Orientation Score on the Curriculum and Environment Survey	TOTOT	12

Data Reduction of Criterion or Outcome Measures

Success in nonpromotion may be established in several ways. One may examine academic achievement, affective adjustment, and social adjustment. Within each of the three areas of success, information may be obtained from the child, from the teacher, or from the parent. In the present study, however, we elected not to use the parents as a source of information about achievement outcomes and not to use the children themselves as sources of information about social outcomes because these informants can provide us with little information. Parents have little experience in judging a child's achievement level accurately, and convenient direct measures of children's social skills were not available.

Outcome as judged by teachers. We asked teachers in the follow-up interview to use a five-point scale in rating the child's progress over the retained year in learning to read, learning mathemathics, learning to write (handwriting), language development (vocabulary, concepts), following directions, completing classroom assignments, concentrating (attention span), following school rules, getting along with peers (cooperativeness), being accepted by classmates (popularity), developing fine motor skills, and developing gross motor skills. These ratings, when subjected to factor analysis, yielded the results shown in Table 21. Two factors have eigenvalues greater than one. The two main factors are academic skill and social skill whereas the third factor would seem to be motor skill.

A scale can be constructed of the following items: reading, math, language, following directions, completing assignments and attending. This scale of seven ratings has a standardized item alpha reliability of .93 and will be used as a teacher rating of achievement.

TABLE 21

Principal Component Analysis of Year Two Teachers Ratings of Child Skills: Eigenvalues, Percent of Explained Variance, and Factor Loadings

Factor	I	II	III
Eigenvalue	5.28	1.87	1.08
Percent of Variance	44.0	16.5	9.1
Reading	83	04	18
Math	80	05	23
Writing	33	16	71
Language	69	-06	28
Following Directions	59	50	14
Completing Assignments	53	46	32
Attending	63	48	28
Following Rules	16	85	-12
Cooperating with Peers	-03	88	20
Popularity	03	74	40
Fine Motor	28	16	84
Gross Motor	23	09	75

Similarly, the items cooperativeness with peers, popularity, and following school rules may be added to form a scale. Among our entire sample, this scale called Social Skills had a standardized item alpha reliability of .91. This scale will be used as a teacher rating of social skill. It correlates .65 with the PBRS rating of interpersonal behavior.

Teachers were also asked to rate the child's academic progress over the retained year and to rate their confidence in promoting the child to the next grade. They were also asked to describe the child's attitude toward academic school work and toward non-academic school work, the child's feelings about retention, the child's self-concept, and whether or not they thought that retention was a constructive intervention. These last two ratings will also be used as outcome measures. The teacher rating of improvement in self-concept will be used as a measure of growth in the affective domain. The teacher's assessment of the constructiveness of the intervention will be used as a global outcome measure.

Outcome as judged by child performance. As we have seen in the data reduction for the predictors, the child test results in the academic domain can be reduced to a single measure of reading, and the total score on the six Key Math subtests. These two measures will be used as pupil measures of outcome. The most appropriate measure of reading as judged by an examination of the distributions of variables was the Reading Comprehension score based on the First grade version of the test.

In the affective domain, the child's total self concept score on the McDaniels-Piers may be used for the same reasons it was used as a predictor. Also in the affective domain, the total Pupil Behavior Rating survey may also be used as an outcome measure, inasmuch as this was the purpose for which this instrument was designed. In some respects, however, this rating may also be

considered a global rating of pupil status.

As mentioned earlier, there was no direct measure of pupil social growth. The measures from teachers and parents will be used to assess growth of pupil skills.

Outcomes as Judged by Parents In our brief follow up interview with parents at the end of the retained year, we reasoned that the parents would best be able to inform us about the changes they had seen in their child, report their attitudes toward the school, give a general judgment about how successful they believed the retention had been, and report traumatic or stressful events that had occured during the year. After examining the responses to these questions, we concentrated on obtaining the criteria for success. As before, we subjected the items related to changes they had seen in their child and judgments of success to Principal Component Analysis.

The changes asked about concerned attitude toward school, confidence in ability to do school work, ability to get along with other children, self-concept, physical coordination. We asked about the mother and father's evaluation of the decision to repeat the grade, a global rating of the success of the retention intervention, and whether or not each of the mother and father would retain the child if they had the decision over. Table 22 contains the results of this Principal Component Analysis.

The first factor is a measure of mother's feeling that retention was successful. The two questions most loading on the factors, mother's attitude and mother would do again, correlate .74. The general rating of success was correlated -.55 with mother's attitude and -.50 with would do again. From the evidence suggested by this first factor, the outcome measure general rating of success of the intervention seems justified, which is quite related to the mothers' attitudes.

TABLE 22

Principal Component Analysis of Parent Observations of Child

Factor	I	II	III	IV
Eigenvalue	2.74	2.08	1.16	1.01
Percent of Variance	27.40	20.80	11.60	10.10
Attitude Toward School	12	80	16	02
Confidence in Ability	-04	81	04	10
Ability to Get Along with Peers	17	06	10	88
Self-Concept	08	78	-10	22
Physical Coordination	-26	23	-06	49
Mother's Attitude toward Nonpromotion	92	-01	10	14
Father's Attitude toward Nonpromotion	44	05	63	-23
General Rating of Success	-68	-36	-21	-02
Mother Would Do Again	89	03	12	-17
Father Would Do Again	-08	05	88	17

The second factor groups attitude toward school, confidence in ability and self concept. This factor is a measure of affective outcome. The three item scale formed from these variables has a Cronbach's alpha reliability of .75 and may be used as a measure of outcome in the affective domain.

The third factor would appear to be father's attitude. The data on fathers was collected largely from the mothers who tended to be the interview respondents. Because of uncertainty of the accuracy of this information, it will not be used as an outcome measure.

The final factor is clearly social skill (with physical coordination). The existence of this as a separate outcome, it follows that this question may be used as an outcome measure, tapping progress in the social domain.

Figure 1 indicates a schematic representation of all of the outcome variables. They are arranged by outcome domain and source of information. Eleven criteria were thus obtained. These criteria will be related to the 43 predictors in the subsequent analyses. One may ask if these criteria are independent. When the 11 outcome criteria are factor analyzed, the result is displayed in Table 23.

The first factor can best be labeled teacher opinion. The teacher is the source of the data loading on this factor. The second factor is parent opinion, and the third factor is difficult to interpret. The variables do not collapse into outcome areas and must be kept separate, for this reason, although there is a good deal of consistency across sources.

FIGURE 1

Schematic Organization of Outcome Measures

Outcome Domain	Source	Variable	Abbreviation
Academic Outcomes	Teacher	Rating of child's progress during retained year in several subjects	CRITACAD
	Child	Score on Reading Comprehension Test	RECOMP 80
		Score on Key Math Test	KEYMAT 80
	Parents	(None)	
Affective Outcomes	Teacher	Rating of child's self-concept	CRITSELC
		PBRS Total Score	PBRS 80
	Child	McDaniel-Piers Total Self-Concept	TOTSC 80
	Parents	Parents ratings of changes in attitude toward school, confidence in ability and self-concept	PARAFF
Social Outcomes	Teacher	Rating of child's cooperativeness with peers, popularity, and school rule following	CRITSOC
	Child	(none)	
	Parents	Rating of ability to get along with peers	PARSOC

FIGURE 1 (Cont'd.)

Outcome Domain	Source	Variable	Abbreviation
Global Rating of Outcome	Teacher	Teacher's rating of how constructive retention was	CONSTRUC
	Child	(none)	
	Parent	General rating of success	PARSUCC

TABLE 23

Principal Component Analysis of Outcome Criteria for Success

Factor	I	II	III
Eigenvalue	3.07	2.34	1.15
Percent of Variance	27.9	21.3	10.4
Variable			
CRITACAD	83	16	13
RECOMP	-55	49	-44
KEYMAT80	-38	58	-36
CRITSELC	-68	-06	-04
PBRS80	68	34	-09
TOTSC80	-48	-12	29
PARAFF	-06	68	46
CRITSOC	61	48	36
PARSOC	-15	80	00
CONSTRUC	54	17	21
PARSUCC	-35	52	57

Data Analysis Strategy

At this point we have isolated 43 separate possible predictors of success during the repeated first grade (Tables 10, 13, 18, and 20). We have also indicated 11 possible measures of success (Figure 1). The predictors were determined by source -- child, teacher interview, parent interview, classroom measures. Although it might be of interest to place all of the predictors into a single multiple regression equation for each outcome, the number of subjects is not sufficiently large to justify this procedure. Instead, the predictors were regrouped into theoretically meaningful sets, and 7 separate multiple regression analyses or "experiments" were performed on each outcome. Next, the significant predictors from each "experiment" were combined for an area so that the relative contribution of different variables could be calculated.

Regrouping the predictors. We were most interested in learning how the child's level of immaturity would be related to success. The measures of immaturity were those coming from the child tests and ratings so the first set of predictors are the child status variables listed in Table 10.

Next we combined information from the teacher interview and the parent interview to create a set of variables reflecting teacher and child's attitudes about retention and the teacher's reasoning behind the retention decision. These variables together made up the second set.

As an independent factor, we hypothesized that parent attitudes would also be important. We combined together information from the first parent and teacher interviews to group the measures related to attitude toward the school and attitude toward the retention decision into the third set of predictors.

The fourth set of predictors consisted of information related to the child's early life. Were the child's experiences as an infant, toddler,

preschooler, kindergartener related in any way to success? We included age and sex in this set of predictors because they may be related to the quality of the early experiences.

The fifth category of predictors was made up of information about the kind of home background the child came from. It included demographic factors (SES, Ethnic group, as well as stress in the home in 1979 and 1980) and the extent of reported parent-child contact. Although these factors were not hypothesized to be of great importance because more direct measures of the child's status were available, nevertheless, they were included because of their importance in research on other subjects.

The sixth and seventh sets of predictors consisted of measures of the classroom environment during the initial first grade and the repeated first grade. The repeated first grade environment was of particular interest because of the implication of possible refinements in the intervention of having a child repeat the grade. If some environments are better than others, these could be used for the children repeating. For this reason the measures of the repeated first grade classroom were analyzed independently.

Figure 2 presents the theoretical model of the factors that might contribute to success during the non-promoted year. The circles are labeled with the name of the set and contain a list of the specific variables included. Each circle was a separate multiple regression analysis for each of the outcomes (in square boxes). The arrows in the model represent time and imply, to a limited extent, causality.

In multiple regression analysis, one may specify the order in which the variables are to be entered into the equation in a stepwise manner. Since all of the outcomes except the two global ratings of success by teacher and parent were related to present status at the end of the repeated year, and not to

change, it was important to correct the outcomes for the pupil's initial status. When the initial status is corrected for, the remaining significant predictors are related to change or improvement. To make this correction, in the prediction of academic outcomes, the variables of READING and TOTKEYM were automatically entered first, then the remainder of the variables in accordance to their predictive power. In the prediction of social and affective outcomes, initial status in McDaniel-Piers Self Concept and the teacher rating of intra-personal relations were entered first before the other variables. Thus variables predicting outcome beyond these variables were related to change in these areas. The order of variables was not specified for the global measures of change. Also the specification of order was only done in the prediction using the child status (immaturity) variables and in the analysis in which the "significant" variables were combined.

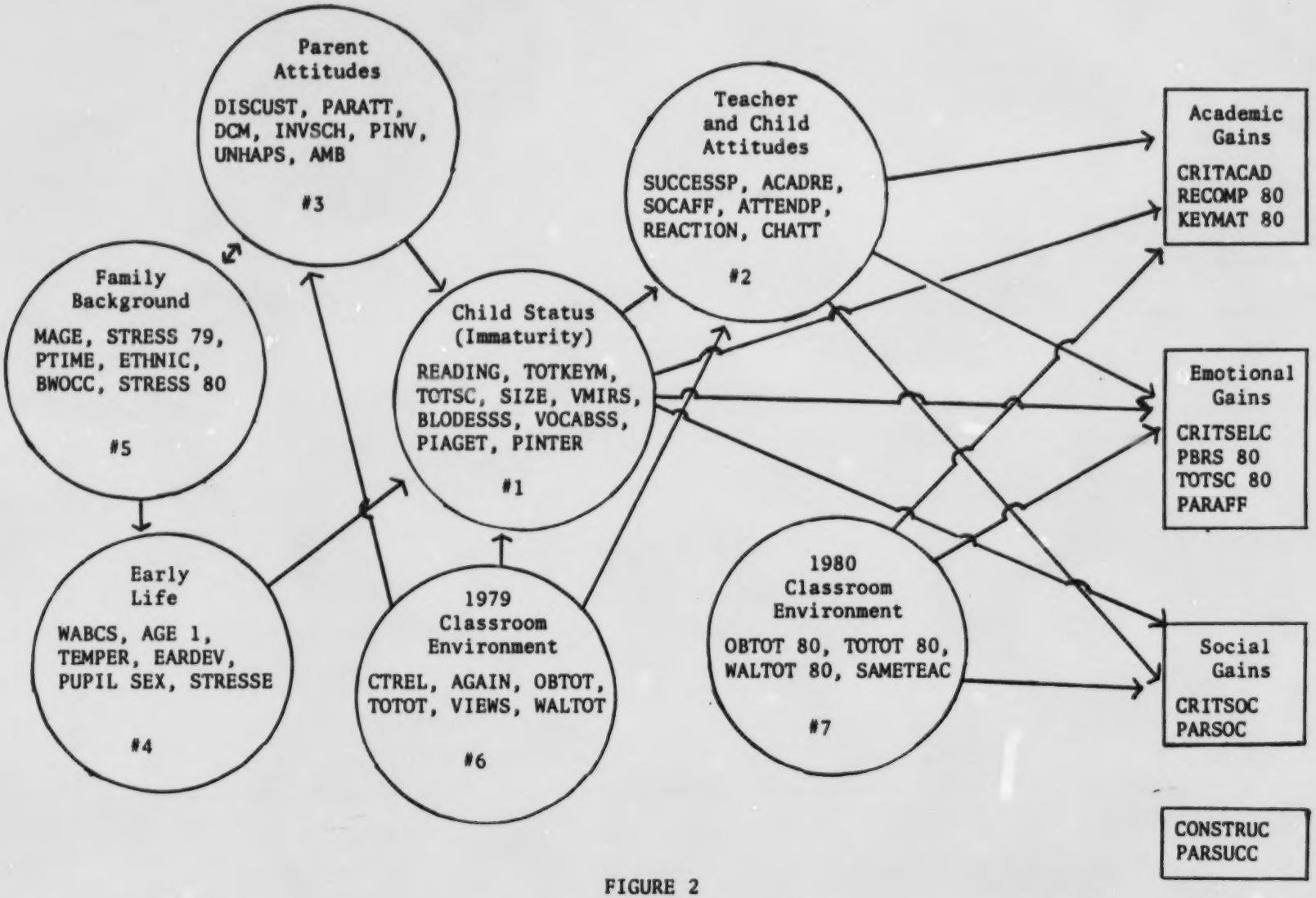

FIGURE 2

A model of relationship of predictors and success in first grade retention.

Prediction of Academic Outcomes

Table 24 contains the results of the seven multiple regression analyses done with the teacher rating of Academic Progress as the outcome measure. Significant predictors of this global teacher rating of skill academic areas at the end of the retained year were from the first set, Reading status, from the second set, teacher's confidence in the decision, and from the fourth set, learning the ABC's in preschool or kindergarten. Almost significant as predictors were self-concept and openness of 1980 classroom.

Table 25 contains the results of the seven multiple regression analyses each predicting the Reading Comprehension score using end-of-year first grade norms. Here, the only significant predictors were from the child status variables: Reading status and Mathematics score. Nothing else correlated with reading achievement. Multiple regression can be used to examine gains by considering what adds to prediction after initial status is removed from the equation. Discounting reading, mathematic score is the best predictor of pupil gains in reading.

Table 26 contains the predictors for mathematics achievement at the end of the repeated grade. In addition to mathematics skill one year earlier they include 1) the extent to which attendance was a factor in the decision, 2) how involved the parents were in school, 3) whether or not the child was from the majority culture, and 4) the observer's rating on the Walberg and Thomas Scale. Gains in math were associated with attendance problems in the initial first grade, positive involvement of the parents with the school, being a child from a majority household, and coming from a traditional, structured classroom.

TABLE 24

Multiple Regression of Seven Sets of Predictors of Teacher Rating of Academic Progress (CRIACAD)

[high value equals low skills]

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	READING	14.38	.00	.43	-.43
	2	TOTKEYM	.68	.41	.44	-.25
	3	TOTSC	3.62	.06	.49	-.34
CHILD	4	BLODESSS	2.84	.10	.53	-.28
STATUS	5	PINTER	.69	.41	.54	.11
	6	SIZE	.23	.63	.54	.12
	7	PIAGET	.15	.70	.54	-.12
	8	VOCABSS	.07	.79	.54	-.14
	9	VMIRS	.02	.89	.54	-.11
TEACH,	1	SUCCESSP	9.33	.00	.35	-.35
CHILD	2	ACADRE	1.29	.26	.38	.14
ATTITUDE	3	REACTION	.57	.46	.39	.02
AND	4	ATTENDP	.37	.55	.39	.06
REASON	5	CHATT	.13	.72	.40	-.13
	6	SOCAFF	.02	.90	.40	.11

TABLE 24 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	DISCUST	1.28	.26	.14	.14
	2	PARATT	.83	.37	.18	.09
PARENT	3	DCM	.33	.57	.19	-.05
ATTITUDE	4	INVSCH	.50	.48	.21	-.06
	5	PINV	.16	.69	.22	-.03
	6	UNHAPS	.13	.72	.22	.08
	7	AMB	.03	.85	.22	.04
	1	WABCS	4.63	.04	.26	-.27
EARLY	2	AGE1	2.01	.16	.32	.18
LIFE	3	TEMPER	1.54	.22	.35	-.12
	4	EARDEV	.80	.35	.37	.21
	5	PUPILSEX	.07	.79	.37	.02
	6	STRESSE	.06	.82	.37	.04
	1	MAGE	3.07	.09	.22	.22
FAMILY	2	STRESS79	.75	.39	.24	-.07
BACKGROUND	3	PTIME	.46	.50	.26	-.04
	4	ETHNIC	.18	.67	.27	.05
	5	STRESS80	.11	.74	.27	-.06
	6	BWOCC	.04	.83	.28	-.01

TABLE 24 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	CTREL	.82	.37	.12	.12
CLASSROOM	2	AGAIN	.60	.44	.15	-.06
1979	3	OBTOT	.44	.51	.18	-.08
	4	VIEWS	.17	.69	.18	-.07
	5	TOTOT	.16	.69	.19	-.05
CLASSROOM	1	WALTOT80	3.45	.07	.23	-.23
1980	2	SAMETEAC	3.06	.08	.32	-.20

TABLE 25

Multiple Regression of Seven Sets of Predictors of Reading Comprehension at the End of Repeated First Grade (RECOMP80)

[high value equals high skills]

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	READING	34.27	.00	.60	.60
	2	TOTKEYM	9.40	.00	.66	.49
CHILD	3	PINTER	2.03	.16	.68	.13
STATUS	4	SIZE	1.01	.32	.69	-.12
	5	PIAGET	.34	.56	.69	.10
	6	TOTSC	.13	.72	.69	.27
	7	VOCABSS	.09	.77	.69	.40
	8	BLODESSS	.12	.73	.69	.14
	9	VMIRS	.05	.83	.69	.03
TEACH,	1	ACADRE	1.28	.26	.14	-.14
CHILD	2	SOCAFF	1.18	.29	.19	.07
ATTITUDE	3	SUCCESSP	.37	.55	.20	.05
AND	4	ATTENDP	.23	.63	.21	.05
REASON	5	CHATT	.16	.69	.22	-.05
	1	PARATT	2.72	.10	.20	-.20
PARENT	2	INVSCH	2.33	.13	.27	.19
ATTITUDE	3	DCM	2.28	.14	.32	.06
	4	BIOR	.53	.47	.34	.02
	5	PINV	.32	.58	.34	-.05
	6	DISCUST	.08	.78	.34	-.00

TABLE 25 (contd)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	AGE1	3.03	.09	.22	-.22
EARLY	2	STRESSE	1.60	.21	.27	-.17
LIFE	3	WABCS	1.24	.27	.30	.14
	4	EARDEV	1.85	.18	.34	.11
	5	PRESCH	1.07	.31	.37	.08
	6	PUPILSEX	.31	.58	.37	-.13
	7	TEMPER	.07	.80	.37	-.03
	1	ETHNIC	3.64	.06	.24	.24
FAMILY	2	MAGE	1.79	.19	.29	.18
BACKGROUND	3	BWOCC	.73	.40	.31	-.12
	4	STRESS80	.34	.56	.31	.08
	5	STRESS79	.07	.79	.32	.09
	1	VIEWS	.79	.38	.11	-.11
CLASSROOM	2	WALLTOT	.62	.44	.15	-.10
1979	3	OBTOT	.92	.34	.20	.03
	4	TOTOT	.42	.52	.21	-.01
	5	CTREL	.29	.60	.22	.10
	6	AGAIN	.04	.85	.23	.04
	1	WALTOT80	.28	.60	.07	.07
CLASSROOM	2	OBTOT80	.11	.74	.08	-.02
	3	TO80	.13	.72	.09	-.05
	4	SAMETEAC	.10	.75	.10	.03

TABLE 26

Multiple Regressions of Seven Sets of Predictors and Total Score on Six Tests of the Key Math Test (KEYMAT80)

[high value equals high skills]

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	TOTKEYM	86.53	.00	.76	.76
	2	READING	.58	.45	.77	.34
	3	PINTER	1.54	.22	.77	.06
CHILD	4	VOCABSS	3.55	.06	.79	.57
STATUS	5	SIZE	.81	.37	.79	.02
	6	TOTSC	.52	.47	.79	.20
	7	BLODESSS	.48	.49	.79	.04
	8	PIAGET	.24	.63	.80	.16
	9	VMIRS	.02	.88	.80	.07
TEACH,	1	ATTENDP	4.10	.05	.24	.24
CHILD	2	ACADRE	3.12	.08	.32	-.19
ATTITUDE	3	SUCCESSP	1.00	.32	.34	.03
AND	4	REACTION	.87	.36	.36	-.11
REASON	5	SOCAFF	.12	.73	.36	.05
	6	CHATT	.10	.75	.36	.01

TABLE 26 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	INVSCH	6.32	.01	.30	.30
	2	BIOR	2.25	.14	.34	.14
	3	AMB	.78	.38	.36	.14
PARENT	4	DCM	.86	.36	.37	.01
ATTITUDE	5	PARATT	.15	.70	.38	.06
	6	UNHAPS	.24	.63	.38	.02
	7	PINV	.16	.69	.38	.15
	8	DISCUST	.07	.79	.39	.03
	1	TEMPER	1.54	.22	.16	-.16
EARLY	2	EARDEV	1.55	.22	.22	-.15
LIFE	3	PRESCH	.94	.34	.25	.14
	4	AGE1	1.06	.31	.28	-.14
	5	STRESSE	.71	.40	.30	.10
	6	PUPILSEX	.76	.39	.32	.10
	7	WABCS	.45	.51	.33	.11
	1	ETHNIC	17.80	.00	.47	.47
FAMILY	2	PRIME	2.25	.14	.50	-.16
BACKGROUND	3	MAGE	2.26	.14	.53	.16
	4	STRESS79	.44	.51	.53	.16
	5	STRESS80	.04	.85	.53	.06

TABLE 26 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	OBTOT	4.42	.04	.26	-.26
CLASSROOM	2	CTREL	3.28	.08	.34	.22
1979	3	TOTOT	2.02	.16	.38	-.12
	4	WALTOT	1.23	.27	.41	-.15
	5	VIEWS	.04	.85	.41	-.07
	6	AGAIN	.01	.92	.41	.08
	1	OBTOT80	1.83	.18	.17	-.17
CLASSROOM	2	TO80	1.67	.20	.24	-.12
1980	3	WALTOT80	1.19	.28	.27	.16
	4	SAMETEAC	.05	.83	.28	.01

The top of Table 27 contains the partial results of the secondary analysis when the significant variables from Table 24-26 are entered into the equation. Variables significant less than .10 were dropped from Table 27. From these data it appears that the predictors of academic growth, in addition to initial status are teacher's confidence in the decision, math achievement, and for gains in mathematics, whether or not the child's attendance was a factor in the retention decision, and the child's ethnicity. The gains in prediction over initial status are not sizable but are significant.

The variables not significant and not noted in Tables 24-26 are of great interest. Almost all of the measures of immaturity were <u>not</u> related to gains during the repeated year. Teacher, child, and parent attitudes were not critical variables. Nor were early history, family background, or general, classroom environment important. These data do not substantiate many speculations concerning nonpromotion.

TABLE 27

A Second-level Analysis of Significant

Predictors From Seven Different Analyses

ACADEMIC OUTCOMES

CRIACAD

VAR	f	Sig	Mult R
READING	14.4	.00	.43
SUCCESSP	6.6	.01	.52
WABCS	3.3	.07	.55

RECOMP80

VAR	f	Sig	Mult R
READING	34.3	.00	.60
TOTKEYM	9.4	.00	.66

KEYMATH80

VAR	f	Sig	Mult R
TOTKEYM	86.5	.00	.76
ATTENDP	5.1	.03	.78
ETHNIC	4.7	.03	.80
OBTOT	3.0	.09	.81

AFFECTIVE OUTCOMES

CRITSELC

VAR	f	Sig	Mult R
READING	8.4	.00	.35
SIZE	5.2	.03	.43
SUCCESSP	3.0	.09	.48

PBRS80

VAR	f	Sig	Mult R
SUCCESSP	27.4	.00	.55
PINTER	10.4	.00	.64
WABCS	11.2	.00	.71
TOTSC	6.9	.01	.74
VOCABSS	5.3	.02	.77
BLODESSS	3.8	.06	.78
PINV	4.0	.05	.80
PARATT	2.8	.10	.81

TOTSC80

VAR	f	Sig	Mult R
TOTSC	7.0	.01	.32
WALTOT80	7.1	.01	.44
PINTER	10.5	.00	.56
PIAGET	10.4	.00	.65

PARAFF

VAR	f	Sig	Mult R
ETHNIC	10.6	.00	.38
STRESS79	7.9	.00	.49
OBTOT80	4.1	.05	.54
SAMETEAC	4.1	.05	.58

TABLE 27 (Cont.)

SOCIAL OUTCOMES

CRITSOC				PARSOC			
VAR	f	Sig	Mult R	VAR	f	Sig	Mult R
SUCCESSP	19.8	.00	.49	ETHNIC	8.7	.00	.35
PINTER	8.0	.01	.57	PINTER	4.2	.03	.43
WABCS	8.2	.01	.64	CTREL	4.0	.05	.49

GLOBAL OUTCOMES

CONSTRUC				RATESUC			
VAR	f	Sig	Mult R	VAR	f	Sig	Mult R
TOTSC	7.0	.01	.32	PARATT	10.9	.00	.39
BLODESSS	6.6	.01	.43	DISCUST	3.6	.06	.45
UNHAPS	6.6	.01	.52	INVSCH	3.7	.06	.50
WALTOT80	4.7	.03	.57	OBTOT80	6.1	.02	.57
				WALTOT80	5.4	.03	.62

Prediction of Affective Outcomes

Four outcome measures were available to assess affective status at the end of the repeated grade: the teacher rating of the child's self-concept, the total score on the Pupil Behavior Rating Survey, the child's score on the McDaniel-Piers self-concept measures, and the parent's rating of change in emotional adjustment.

Table 28 contains the results of the multiple regression analyses predicting teacher ratings of self-concept. It is interesting to note that initial status in affective development did not significantly predict this outcome but that reading achievement, teacher confidence in the decision, positive parent attitude and having the same teacher did. Another predictor was the physical size of the pupil. The smaller the pupil, the better the teacher rated his self-concept.

The results for the prediction of PBRS total are contained in Table 29. The PBRS is predicted by a number of factors. Even after the original affective status is controlled for, by the measure of self-concept and the PBRS subscore, the measures of intellectual functioning, the teacher's confidence in the decision, the extent of teacher-reported parent involvement in the school, the previous achievement in school, and the child-teacher relationship are all significant predictors. The other predictor is whether or not social or affective considerations were used in making the retention decision. In this case if the child was retained for this reason, his status was likely to be poor on this measure.

Self-concept and change in self-concept was a function of good social skills (PINTER), weak cognitive development and an open classroom during the repeated grade. (See Table 30)

Finally, positive parent ratings of emotional maturity and changes in maturity were predicted by low verbal intellectual functioning, being retained

TABLE 28

Multiple Regression of Seven Sets of Predictors and Teacher Rating of Self-Concept (CRITSELC)

[high value equals positive self concept]

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	TOTSC	3.82	.06	.24	.24
	2	PINTER	.21	.65	.25	-.05
	3	READING	5.50	.02	.37	.35
CHILD	4	SIZE	4.20	.05	.44	-.28
STATUS	5	TOTKEYM	.82	.37	.46	.24
	6	VOCABSS	.64	.43	.47	.12
	7	PIAGET	.43	.52	.47	-.02
	8	BLODESSS	.10	.75	.47	.04
TEACH,	1	SUCCESSP	7.67	.01	.32	.32
CHILD	2	ATTENDP	1.61	.21	.36	.03
ATTITUDE	3	ACADRE	1.31	.26	.38	.13
AND	4	REACTION	.09	.76	.38	.01
REASON	5	CHATT	.12	.73	.39	.15
	6	SOCAFF	.05	.82	.39	-.01

TABLE 28 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	PARATT	4.46	.04	.25	-.25
	2	INVSCH	1.86	.18	.30	.17
PARENT	3	DCM	1.82	.18	.34	.04
ATTITUDE	4	UNHAPS	2.72	.10	.39	-.20
	5	PINV	.57	.46	.40	-.01
	6	BIOR	.19	.66	.40	-.13
	7	AMB	.08	.78	.40	.05
	8	DISCUST	.03	.86	.40	.01
	1	WABCS	1.77	.19	.17	.17
	2	STRESSE	1.25	.27	.22	.14
EARLY	3	PUPILSEX	.77	.38	.24	.10
LIFE	4	PRESCH	.50	.48	.26	-.12
	5	EARDEV	.36	.55	.27	-.14
	6	AGE1	.09	.76	.27	.06
	7	TEMPER	.05	.83	.27	-.02
	1	STRESS80	1.27	.26	.14	-.14
FAMILY	2	PTIME	.98	.33	.19	.14
BACKGROUND	3	BWOCC	.93	.34	.22	-.13
	4	STRESS79	.69	.41	.25	.06
	5	ETHNIC	.14	.71	.25	.05
	6	MAGE	.05	.82	.25	.08

TABLE 28 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	WALTOT	3.84	.06	.25	.25
CLASSROOM	2	VIEWS	1.70	.20	.29	.17
1979	3	CTREL	1.16	.29	.32	-.16
	4	TOTOT	.34	.56	.33	-.18
	5	AGAIN	.29	.59	.34	-.16
	6	OBTOT	.11	.74	.34	.11
	1	SAMETEAC	4.17	.05	.25	.25
CLASSROOM	2	TO80	2 16	.15	.31	-.14
1980	3	WALTOT80	1.18	.28	.34	.16
	4	OBTOT80	.04	.84	.34	.12

TABLE 29

Multiple Regression of Seven Sets of Predictors and Total Score of Pupil Behavior Rating Survey (PBRS80)

[high value equals maladjustment]

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	PINTER	19.05	.00	.48	.48
	2	TOTSC	13.93	.00	.61	-.36
	3	VOCABSS	5.22	.03	.65	-.08
CHILD	4	BLODESSS	4.04	.05	.68	-.22
STATUS	5	VMIRS	.49	.49	.68	-.18
	6	READING	.39	.54	.69	-.38
	7	PIAGET	.47	.50	.69	-.17
	8	SIZE	.16	.69	.70	.17
TEACH,	1	SUCCESSP	29.43	.00	.56	-.56
CHILD	2	SOCAFF	7.92	.01	.62	.38
ATTITUDE	3	ATTENDP	1.08	.30	.63	.15
And	4	ACADRE	.58	.45	.64	.19
REASON	5	REACTION	.17	.68	.64	-.09
	6	CHATT	.11	.74	.64	-.14

Table 29 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	PARATT	3.05	.09	.21	.21
	2	PINV	5.44	.02	.34	-.21
PARENT	3	AMB	2.57	.11	.39	-.18
ATTITUDE	4	DCM	.96	.33	.41	-.11
	5	DISCUST	.72	.40	.42	.07
	6	BIOR	.17	.68	.42	.01
	7	UNHAPS	.06	.81	.42	.03
	8	INVSCH	.03	.86	.42	.08
	1	WABCS	8.37	.01	.34	-.34
EARLY	2	PUPILSEX	2.28	.14	.39	.18
LIFE	3	PRESCH	1.36	.24	.41	.22
	4	AGE1	.99	.32	.43	.18
	5	TEMPER	.14	.71	.43	.03
	6	STRESSE	.07	.79	.43	.03
	1	STRESS80	2.23	.14	.19	.19
FAMILY	2	MAGE	1.04	.31	.23	.12
BACKGROUND	3	ETHNIC	.35	.56	.24	.11
	4	STRESS79	.16	.69	.24	.11
	5	BWOCC	.04	.84	.24	-.01

TABLE 29 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	CTREL	4.08	.05	.25	.25
CLASSROOM	2	WALTOT	1.38	.24	.29	-.14
1979	3	AGAIN	.20	.66	.30	.14
	4	VIEWS	.03	.87	.30	-.04
	5	OBTOT	.04	.84	.30	-.08
	1	OBTOT	2.39	.13	.20	-.20
CLASSROOM	2	SAMETEAC	.38	.54	.21	-.08
1980	3	TO80	.42	.52	.23	.12
	4	WALTOT80	.03	.86	.23	-.05

TABLE 30

Multiple Regression of Seven Sets of Predictors and McDaniel-Piers Total Self-concept Score (TOTSC80)

[high value equals positive self-concept]

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	TOTSC	7.04	.01	.32	.32
	2	PINTER	5.81	.02	.42	-.27
	3	PIAGET	5.79	.02	.50	-.24
CHILD	4	TOTKEYM	1.57	.22	.52	.05
STATUS	5	BLODESSS	.73	.40	.53	-.13
	6	SIZE	.55	.46	.54	-.18
	7	READING	.47	.50	.54	.25
	8	VMIRS	.27	.60	.54	-.05
	9	VOCABSS	.19	.67	.55	.01
TEACH,	1	SOCAFF	3.85	.05	.24	-.24
CHILD	2	REACTION	1.86	.18	.29	-.13
ATTITUDE	3	SUCCESSP	2.06	.16	.33	.19
AND	4	CHATT	.11	.74	.34	-.00
REASON	5	ATTENDP	.04	.84	.34	-.12
	6	ACADRE	.03	.85	.34	-.11

TABLE 30 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	INVSCH	1.22	.27	.13	-.13
	2	BIOR	.73	.40	.17	.12
	3	AMB	.79	.38	.20	.08
PARENT	4	DCM	.74	.39	.22	.11
ATTITUDE	5	PARATT	1.01	.32	.26	-.08
	6	UNHAPS	.33	.57	.27	-.05
	7	DISCUST	.31	.58	.28	.06
	8	PINV	.04	.84	.28	.02
	1	PRESCH	3.59	.06	.23	-.23
	2	PUPILSEX	1.35	.25	.27	-.15
EARLY	3	EARDEV	1.33	.25	.31	-.14
LIFE	4	TEMPER	.48	.49	.32	.15
	5	WABCS	.59	.44	.33	.17
	6	AGE1	.15	.70	.34	-.00
	7	STRESS80	.08	.79	.34	-.03
	1	MAGE	3.72	.06	.24	-.24
	2	STRESS79	2.59	.11	.31	-.23
FAMILY	3	BWOCC	1.83	.18	.35	-.17
BACKGROUND	4	PTIME	.44	.51	.36	-.13
	5	ETHNIC	.08	.77	.36	.07
	6	STRESS80	.01	.91	.36	-.06

TABLE 30 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	VIEWS	3.82	.06	.24	.24
CLASSROOM	2	CTREL	1.45	.23	.29	-.19
1979	3	OBTOT	.47	.50	.30	.14
	4	WALTOT	.43	.52	.31	-.03
	5	TOTOT	.55	.46	.32	-.06
	1	WALTOT80	6.72	.01	.32	.32
CLASSROOM	2	TO80	1.44	.24	.35	-.22
1980	3	SAMETEAC	1.87	.18	.39	.12
	4	OBTOT80	.07	.79	.39	.17

for academic considerations, not being retained for social or affective reasons, not having attended preschool, being minority, having less stress in the initial first grade year, having open classrooms both years, and having the same teacher. Table 31 displays these results.

Returning to the second section of Table 27 the reader may inspect the results of the secondary regression analyses. The order of importance of the variables is indicated here and the maximum multiple correlation. The predictors explain a great deal of PBRS, self-concept, and parent ratings of emotional development and less of teacher ratings of self-concept. Classroom environment, PBRS rating of interpersonal relations and level of cognitive and academic skills are common predictors of at least two measures of emotional development. Again, most measures of immaturity are unrelated to growth in emotional development during the retained year.

Prediction of Social Outcomes

The variable related to initial status in the social domain was the interpersonal competence score from the PBRS (PINTER). This variable was entered first in both the prediction of teacher and parent rating of social skills. In addition to this variable, high self-concept, teacher confidence in the decision, learning in pre-school and kindergarten, and a positive teacher child relationship predicted teacher rating of social skills. (See Table 32).

Positive parent rating of social skills (Table 33) was predicted by low math achievement, being a minority group member, and a good child-teacher relationship in addition to PINTER. It is interesting to note that minority parents rated their children better in both social and affective development.

Again returning to Table 27, it is evident that improvement in social skills is related to teacher confidence in retention, ethnicity, previous achievement, and the quality of the child and teacher relationship. Again, the

TABLE 31

Multiple Regression of Seven Sets of Predictors and Parent Ratings of Changes in Affective Adjustment (PARAFF)

[high value equals little change]

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	TOTSC	2.92	.09	.21	-.21
	2	PINTER	.48	.49	.23	.08
	3	VOCABSS	11.44	.00	.45	.36
CHILD	4	SIZE	.80	.37	.46	-.05
STATUS	5	TOTKEYM	.85	.36	.48	.11
	6	BLODESSS	.34	.56	.48	-.12
	7	PIAGET	.23	.64	.48	.01
	8	READING	.32	.58	.49	.11
	9	VMIRS	.04	.84	.49	-.14
TEACH,	1	ACADRE	4.03	.05	.24	-.24
CHILD	2	SOCAFF	6.33	.01	.38	.18
ATTITUDE	3	CHATT	1.26	.27	.40	-.19
AND	4	ATTENDP	.79	.38	.41	.16
REASON	5	REACTION	.38	.54	.42	-.14
	6	SUCCESSP	.02	.90	.42	-.14

TABLE 31 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	INVSCH	2.49	.12	.19	.19
	2	AMB	.82	.37	.22	.14
PARENT	3	PARATT	.35	.56	.23	.05
ATTITUDE	4	BIOR	.13	.72	.24	-.07
	5	DEM	.09	.77	.24	-.07
	6	UNHAPS	.03	.87	.24	.04
	7	DISCUST	.01	.91	.24	.03
	1	PRESCH	4.96	.03	.27	.27
	2	EARDEV	.31	.58	.28	.09
EARLY	3	TEMPER	.21	.65	.29	-.00
LIFE	4	PUPILSEX	.26	.61	.29	.06
	5	AGE1	.25	.62	.30	-.02
	6	WABCS	.03	.85	.30	-.07
	7	STRESSE	.02	.88	.30	.01
	1	ETHNIC	10.63	.00	.38	.38
FAMILY	2	STRESS79	7.88	.00	.49	.36
BACKGROUND	3	MAGE	1.19	.28	.51	.19
	4	PTIME	.26	.62	.51	-.04
	5	STRESS80	.21	.65	.51	.15
	6	BWOCC	.01	.91	.51	.03

TABLE 31 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	OBTOT	4.55	.04	.27	-.27
CLASSROOM	2	WALTOT	.28	.60	.27	-.18
1979	3	AGAIN	.27	.60	.28	-.05
	4	CTREL	.15	.70	.29	.02
	5	TOTOT	.12	.73	.29	.12
	6	VIEWS	.03	.86	.29	-.04
	1	SAMETEAC	6.05	.02	.30	-.30
CLASSROOM	2	OBTOT80	4.27	.04	.39	-.25
1980	3	WALTOT80	1.01	.32	.41	.05
	4	TO80	.26	.61	.41	.05

TABLE 32

Multiple Regression of Seven Sets of Predictors of Teacher Rating of Child's Social Skills (CRITSOC)

[high value equals low skills]

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	PINTER	15.17	.00	.44	.44
	2	TOTSC	6.92	.01	.53	-.27
	3	SIZE	2.98	.09	.56	.29
CHILD	4	VOCABSS	1.86	.18	.58	-.01
STATUS	5	TOTKEYM	1.71	.20	.59	.06
	6	PIAGET	2.11	.15	.61	-.15
	7	BLODESSS	.35	.56	.62	.04
	8	READING	.07	.80	.62	-.14
	9	VMIRS	.01	.91	.62	-.04
TEACH,	1	SUCCESSP	19.86	.00	.48	-.48
CHILD	2	SOCAFF	3.49	.07	.52	.29
ATTITUDE	3	ATTENDP	.68	.41	.53	.28
AND	4	REACTION	.73	.40	.54	-.03
REASON	5	CHATT	.41	.53	.54	-.21
	6	ACADRE	.23	.64	.55	.04

TABLE 32 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	PARATT	1.71	.20	.16	.16
PARENT	2	AMB	1.06	.31	.20	-.14
ATTITUDE	3	DCM	.94	.34	.23	-.05
	4	DISCUST	.77	.39	.26	.06
	5	INVISCH	.61	.44	.27	-.09
	6	PINV	.82	.37	.30	.06
	7	BIOR	.06	.80	.30	.09
	8	UNHAPS	.02	.88	.30	.05
	1	WABCS	7.07	.01	.32	-.32
	2	AGE1	2.34	.13	.37	.20
EARLY	3	TEMPER	1.24	.27	.39	-.09
LIFE	4	PRESCH	.70	.40	.40	.20
	5	PUPILSEX	.35	.56	.41	.14
	6	STRESSE	.15	.70	.41	-.04
	7	EARDEV	.09	.76	.41	.14
	1	STRESS80	2.40	.13	.19	.19
FAMILY	2	MAGE	1.26	.27	.24	.14
BACKGROUND	3	ETHNIC	.80	.37	.26	.14
	4	BWOCC	.37	.55	.27	.09
	5	STRESS79	.11	.74	.28	.04
	6	PRIME	.01	.92	.28	.03

TABLE 32 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	CTREL	4.11	.05	.25	.25
CLASSROOM	2	WALTOT	1.66	.20	.30	-.16
1979	3	TOTOT	.13	.72	.30	.10
	4	AGAIN	.10	.76	.31	.13
	5	VIEWS	.14	.71	.31	-.02
	1	OBTOT80	1.31	.26	.15	-.15
CLASSROOM	2	TO80	.09	.76	.15	.07
1980	3	SAMETEAC	.01	.91	.15	.02
	4	WALTOT 80	.01	.91	.15	-.07

TABLE 33

Multiple Regression of Seven Sets of Predictors and Parents Rating of Child's Ability to Get Along with Peers (PARSOC)

[high value equals low skills]

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	PINTER	7.17	.01	.32	.32
	2	TOTKEYM	3.95	.05	.40	.30
	3	TOTSC	.16	.69	.40	.01
CHILD	4	BLODESSS	.93	.34	.42	.14
STATUS	5	READING	.38	.54	.42	.12
	6	SIZE	.28	.64	.43	-.02
	7	VMIRS	.19	.66	.43	-.02
	8	VOCABSS	.19	.66	.43	.23
	9	PIAGET	.12	.73	.44	.09
TEACH,	1	SOCAFF	3.31	.07	.22	.22
CHILD	2	SUCCESSP	1.52	.22	.27	-.19
ATTITUDE	3	ACADRE	.55	.46	.28	-.01
AND	4	REACTION	.46	.50	.29	-.14
REASON	5	ATTENDP	.27	.61	.30	.16
	6	CHATT	.11	.74	.30	-.05

TABLE 33 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	INVSCH	1.08	.30	.13	.13
PARENT	2	AMB	1.32	.25	.19	-.12
ATTITUDE	3	PARATT	.84	.36	.22	.12
	4	PINV	.27	.61	.23	-.08
	5	BIOR	.18	.68	.23	.06
	6	UNHAPS	.08	.78	.24	.01
	7	DISCUST	.01	.91	.24	-.05
	1	PRESCH	2.50	.12	.20	.20
	2	PUPILSEX	.91	.35	.23	.13
EARLY	3	EARDEV	.71	.40	.25	.11
LIFE	4	STRESSE	.62	.43	.27	.09
	5	TEMPER	.22	.64	.28	-.12
	6	AGE1	.14	.71	.28	.10
	7	WABCS	.14	.71	.29	-.11
	1	ETHNIC	8.72	.00	.35	.35
	2	STRESS79	3.05	.09	.41	.25
FAMILY	3	PTIME	.85	.36	.42	.11
BACKGROUND	4	STRESS80	.84	.36	.43	.18
	5	MAGE	.52	.47	.44	.15
	6	BWOCC	.02	.90	.44	.01

TABLE 33 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	CTREL	4.89	.03	.27	.27
CLASSROOM	2	WALTOT	.65	.42	.29	-.10
1979	3	AGAIN	.34	.56	.30	.16
	4	OBTOT	.08	.78	.30	-.01
	5	TOTOT	.06	.81	.30	.01
	6	VIEWS	.01	.91	.31	-.07
	1	OBTOT80	1.46	.23	.15	-.15
CLASSROOM	2	WALTOT80	2.16	.15	.24	.12
1980	3	SAMETEAC	.71	.40	.26	-.12
	4	TO80	.03	.87	.26	-.03

expected aspects of immaturity and attitude seem unrelated to outcomes associated with social growth.

Prediction of Global Ratings of Change

The prediction of teacher's global rating of overall success of the intervention for the child (Table 34) and the parent's global rating of the overall success of having had their child repeat the grade (Table 35) shows little similarity. The teacher's rating is related to the child's self-concept, the child's non-verbal IQ, the parent's satisfaction with the school, whether the teacher was willing to have the child again, and an open classroom environment. The parent's rating, on the other hand, was provided by their positive attitude toward retention, less stress in the child's early life, an observed open classroom, but a teacher-reported more structured classroom.

Once again referring to Table 27 the reader may see the secondary analysis. It is interesting to note that only the variable AGAIN seems less important as does the variable STRESSE: otherwise the predictors are independent and predict about 36% (R^2) of each of the ratings.

Summary of Multiple Regression Analyses

Academic growth was predicted primarily by the level of academic skills possessed at the onset of the retained year. In other words, those children who had learned the most the first time, learned the most the second time. Other aspects of immaturity, as measured in the project, were not correlated to academic gains during the retained year (i.e., levels of intellectual, cognitive, social, emotional, physical, or perceptual development).

Another important predictor of academic progress was the confidence the initial first grade teacher had in the decision to retain the child. A possible conclusion from these data is that children should not be retained unless the teacher is confident that the child will be helped by repeating the

first grade.

In predicting improvement in mathematics achievement, three unique factors emerged, as important: reason for retention, ethnic background and classroom environment. Children with mathematics gains were those retained for attendance problems. Perhaps having an opportunity to review missed mathematics instructions is more beneficial than reviewing missed reading instruction. Non-minority children made more gains in mathematics than minority children, but other family background data were not predictive. If a child had a structured classroom in the initial first grade, he/she also made improvement in mathematics.

Most prominent in the prediction of emotional growth as an outcome of nonpromotion was the level of three types of immaturity: emotional, intellectual, and cognitive development. Higher scores in each of these areas were related to positive improvement in mental health.

As in the case of academic growth, the extent to which the teacher was confident in his or her decision to retain the child was predictive of emotional growth. The teacher was more confident in retaining those children who eventually make emotional gains. The reason for retention was also important in a paradoxical way; the children retained for social and affective reasons tended to make fewer gains in emotional development than children retained for other reasons.

Parental attitudes were generally not powerful predictors of outcome. They were most important however, in predicting emotional growth for the children of parents who had favorable attitudes toward non-promotion.

Emotional growth was also predicted by classroom environmental factors. Those children making the greatest gains had the same teacher for the repeated year, and came from classrooms the initial first grade year that were more open and had more opportunities for individualized instruction.

As in the prediction of other areas, initial skill was a good predictor of social growth. Improvement in social skills was predicted by previous social skills development along with level of self-concept. Other aspects of immaturity were not predictive of gains in social competence.

Again as with affective outcomes, the teacher's confidence in the retention decision was a positive predictor of social outcomes. Similarly the child's experience in pre-first grade academic settings was predictive of social outcomes. Also, if the child was retained for social or affective reasons he/she was more likely not to make as much progress in the social area as other children. It would seem that retaining children with poor social or affective behavior is not very successful.

Another good predictor of social outcomes was the teacher's report of a good relationship with the child. Those children who can interact successfully with adults such as the teacher may be children who will continue to develop social skills during the retained year.

General ratings of the success of the nonpromotion by parents and teachers could be predicted by the child's self concept, and a non-verbal measure of intellectual development. Other predictors were a number of parent attitudes: whether the parents were happy with the school, were involved with the school, supported the retention decision, and had discussed the retention decision.

Classroom environment was also related to general ratings of success. The extent to which a classroom was open, that is the extent to which it was designed to provide many opportunities for individualized instruction, was related to high ratings of success.

Perceptual and physical maturity generally did not predict any of the outcomes of retention considered by this project. They would appear not to be important considerations in retaining a child.

TABLE 34

Multiple Regression of Seven Sets of Predictors of Teacher Rating of Global Rating of Success of Nonpromotion (CONSTRUC)

[high value equals low success]

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	TOTSC	6.97	.01	.32	-.32
	2	BLODESSS	6.62	.01	.43	-.31
	3	PINTER	2.65	.11	.47	.19
CHILD	4	TOTKEVM	2.16	.15	.50	-.22
STATUS	5	VMIRS	.11	.74	.50	-.12
	6	VOCAESS	.08	.78	.50	-.04
	7	READING	.15	.70	.51	-.28
	8	SIZE	.05	.82	.51	.09
TEACH,	1	SUCCESSP	3.58	.06	.23	-.23
CHILD	2	SOCAFF	.93	.34	.26	.16
ATTITUDE	3	ATTENDP	.32	.58	.27	.04
AND	4	CHAIT	.13	.72	.27	-.03
REASON	5	ACADRE	.09	.77	.27	.02
	1	UNHAPS	6.39	.01	.30	.30
	2	DCM	3.16	.08	.36	-.08
PARENT	3	PINV	1.46	.23	.39	.07
ATTITUDE	4	PARATT	1.16	.29	.41	-.01
	5	AMB	.14	.71	.41	.00
	6	INVSCH	.04	.85	.41	-.01
	7	DISCUST	.02	.89	.41	.10

TABLE 34 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	PUPILSEX	1.06	.31	.13	.13
	2	STRESSE	.49	.49	.16	-.09
EARLY	3	TEMPER	.34	.56	.17	-.09
LIFE	4	PRESCH	.43	.51	.19	-.06
	5	WABCS	.44	.51	.21	-.06
	6	AGE1	.09	.77	.21	.05
	7	EARDEV	.03	.86	.22	.04
	1	BWOCC	.99	.32	.13	.13
FAMILY	2	ETHNIC	.60	.44	.16	.09
BACKGROUND	3	MAGE	.57	.45	.19	-.09
	4	PTIME	.14	.71	.19	.04
	5	STRESS79	.12	.73	.20	.05
	6	STRESS80	.04	.84	.20	.01
	1	AGAIN	6.23	.02	.31	.31
CLASSROOM	2	OBTOT	3.81	.06	.39	-.25
1979	3	WALTOT	1.34	.25	.41	.00
	4	VIEWS	.44	.51	.42	-.24
	5	CTREL	.10	.75	.42	.06
CLASSROOM	1	WALTOT80	5.00	.03	.28	-.28
1980	2	SAMETEAC	2.26	.14	.33	-.17
	3	TO80	3.01	.09	.39	.25

TABLE 35

Multiple Regression of Seven Sets of Predictors of Parents Global Rating of Success of Nonpromotion (PARSUCC)

[high value equals success]

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	VMIRS	2.70	.11	.20	-.20
	2	READING	1.78	.19	.26	.16
	3	VOCABSS	.84	.36	.29	-.01
CHILD	4	TOTSC	.72	.40	.30	.12
STATUS	5	BLODESSS	.46	.50	.32	-.09
	6	PIAGET	.50	.48	.33	.01
	7	TOTKEYM	.40	.53	.34	-.06
	8	PINTER	.47	.50	.35	-.00
	9	SIZE	.11	.74	.35	-.04
TEACH,	1	CHATT	1.89	.17	.17	.17
CHILD	2	SUCCESSP	1.03	.31	.21	-.06
ATTITUDE	3	ATTENDP	.57	.45	.23	-.08
AND	4	ACADRE	.49	.49	.25	-.06
REASON	5	SOCAFF	.44	.51	.26	.03
	6	REACTION	.31	.58	.27	.05

TABLE 35 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	PARATT	11.41	.00	.39	-.39
	2	DISCUST	3.82	.06	.45	-.15
	3	INVISCH	3.93	.05	.50	.23
PARENT	4	DCM	1.86	.18	.52	-.29
ATTITUDE	5	UNHAPS	2.22	.14	.55	-.09
	6	AMB	1.54	.22	.56	-.06
	7	PINV	.03	.86	.56	-.23
	8	BLOR	.03	.87	.56	-.02
	1	STRESSE	5.63	.02	.29	-.29
	2	PRESCH	.58	.45	.30	-.10
EARLY	3	PUPILSEX	.51	.48	.31	-.08
LIFE	4	TEMPER	.43	.51	.32	-.05
	5	WABCS	.17	.68	.33	.08
	6	EARDEV	.09	.77	.33	.03
	7	AGE1	.07	.79	.33	-.09
	1	MAGE	1.78	.19	.17	-.17
FAMILY	2	BWOCC	.88	.35	.20	-.11
BACKGROUND	3	PTIME	.76	.39	.23	.07
	4	ETHNIC	.57	.45	.25	.09
	5	STRESS80	.33	.57	.26	.06
	6	STRESS79	.43	.51	.27	-.10

TABLE 35 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	TOTOT	.74	.40	.11	-.11
CLASSROOM	2	CTREL	.38	.54	.14	.09
1979	3	OBTOT	.30	.59	.15	.09
	4	VIEWS	.11	.74	.16	.05
	5	AGAIN	.03	.86	.16	.02
CLASSROOM	1	OBTOT80	4.53	.04	.26	.26
1980	2	WALTOT80	6.66	.01	.41	-.20
	3	SAMETEAC	1.94	.17	.44	.19

Surprisingly, reports from parents and teachers regarding the child's attitude toward being retained were not correlated with child growth during the retained year. Perhaps if there had been better direct information collected from the child, a relationship could have been found.

Sociological variables related to the child's family were also considered as predictors of the four outcome areas, but the variables of mother's age, ethnic background, social class, parent-child contact, child temperament, and degree of family disruption and stress during the school years were not significantly predictive of outcomes.

The Prediction of Outcomes for the Promoted Children

The children who were candidates to repeat the first grade but who ultimately went on to the second grade, i.e., the promoted children, are an interesting comparison group. It is interesting to learn if some of the same predictors are valid for this group of children. Tables 36 through 44 contain the results of the same analyses for the promoted group as were done for the non-promoted group (Tables 24-26, 28-33). Global ratings were not comparable across groups and were not analyzed.

A close examination of these tables indicates that, aside from measures of status in the first grade, other factors were not generally related to second grade achievement. A bit of evidence for the validity of the McDaniels-Piers is the relationship between it and the parent's rating of the child's attitude.

In general the outcomes were predicted just as well for the control group but with fewer variables and primarily by the measures of initial status. The predictors for the retained children were, to a certain extent, unique, giving some validity evidence for their use in identifying children who might profitably repeat the first grade.

TABLE 36

Multiple Regression Predicting Teacher Ratings of Achievement (CRITACAD) for Promoted Children

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	READING	21.28	.00	.58	-.58
	2	TOTKEYM	1.74	.19	.60	-.35
	3	PINTER	.31	.58	.60	.11
CHILD	4	VMIRS	.22	.64	.60	-.07
STATUS	5	SIZE	.14	.71	.61	.08
	6	BLODESSS	.04	.85	.61	-.10
	7	PIAGET	.04	.85	.61	-.22
	8	VOCABSS	.03	.86	.61	-.13
	9	TOTSC	.01	.91	.61	-.11
TEACH,	1	SUCCESSP	3.00	.09	.26	-.26
CHILD	2	ACADRE	1.40	.24	.31	.25
ATTITUDE	3	CHATT	1.60	.21	.36	-.21
AND	4	ATTENDP	.17	.69	.36	-.02
REASON	5	SOCAFF	.02	.90	.36	.12

TABLE 36 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	UNHAPS	2.62	.11	.24	.24
	2	INVSCH	1.39	.25	.30	-.14
	3	BIOR	.43	.51	.31	.22
PARENT	4	DISCUST	.31	.58	.32	.07
ATTITUDE	5	PINV	.22	.64	.33	.01
	6	DCM	.08	.77	.33	.11
	7	PARATT	.05	.83	.33	-.00
	8	AMB	.02	.90	.34	-.00
	1	STRESSE	1.62	.21	.18	.18
	2	EARDEV	.62	.44	.21	-.08
EARLY	3	PUPILSEX	.57	.45	.24	.09
LIFE	4	AGE1	.25	.62	.25	-.11
	5	PRESCH	.13	.72	.26	-.07
	6	TEMPER	.09	.76	.26	.10
	7	WABCS	.04	.83	.26	.02
	1	STRESS79	3.20	.08	.25	-.25
FAMILY	2	PTIME	.98	.33	.29	.12
BACKGROUND	3	MAGE	.23	.63	.30	.08
	4	STRESS80	.19	.67	.30	.01
	5	ETHNIC	.08	.78	.31	-.01
	6	BWOCC	.02	.88	.31	-.06

TABLE 36 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	AGAIN	1.91	.18	.21	.21
	2	VIEWS	1.10	.30	.27	-.19
CLASSROOM	3	OBTOT	.14	.71	.27	.12
1979	4	WALTOT	.41	.53	.29	-.02
	5	TOTOT	.40	.53	.31	-.04
	6	CTREL	.03	.86	.31	.18
	1	TO80	.53	.47	.11	-.11
CLASSROOM	2	OBTOT80	.30	.59	.14	-.04
1980	3	WALTOT80	.30	.59	.17	.07
	4	SAMETEAC	.12	.73	.18	-.03

TABLE 37

Multiple Regressions Predicting Reading Achievement (RECOMP) for Promoted Children

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	READING	11.49	.00	.46	.46
	2	TOTKEYM	1.20	.28	.48	.30
CHILD	3	PIAGET	3.27	.08	.54	-.03
STATUS	4	VMIRS	1.90	.18	.57	.17
	5	PINTER	1.14	.29	.58	.09
	6	SIZE	.54	.47	.59	-.08
	7	BLODESSS	.01	.91	.59	.04
TEACH,	1	CHATT	2.75	.11	.25	.25
CHILD	2	REACTION	2.38	.13	.33	-.24
ATTITUDE	3	ATTENDP	3.20	.08	.42	.17
AND	4	SOCAFF	.78	.38	.44	.18
REASON	5	ACADRE	1.45	.24	.47	-.08
	6	SUCCESSP	.17	.69	.47	.10
	1	AMB	4.05	.05	.29	.29
	2	UNHAPS	2.29	.14	.36	-.28
PARENT	3	BIOR	.13	.72	.37	-.19
ATTITUDE	4	PARATT	.07	.80	.37	-.15
	5	PINV	.05	.82	.37	-.02
	6	INVSCH	.07	.79	.37	-.01

TABLE 37 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	EARDEV	.93	.34	.14	-.14
	2	STRESSE	1.23	.27	.21	.14
EARLY	3	TEMPER	1.59	.21	.28	-.11
LIFE	4	PRESCH	1.28	.27	.32	.13
	5	PUPILSEX	.19	.66	.33	.00
	6	WABCS	.14	.71	.33	-.04
	7	AGE1	.03	.87	.33	-.06
	1	STRESS79	2.25	.14	.21	.21
FAMILY	2	MAGE	1.39	.25	.27	.14
BACKGROUND	3	STRESS80	.59	.45	.29	-.10
	4	BWOCC	.40	.53	.31	-.10
	5	ETHNIC	.27	.60	.32	-.04
	6	PTIME	.18	.68	.32	.00
	1	WALTOT	4.10	.05	.31	-.31
	2	VIEWS	2.17	.15	.38	.29
CLASSROOM	3	CTREL	.29	.60	.38	-.10
1979	4	TOTOT	.11	.74	.39	.20
	5	AGAIN	.11	.75	.39	-.01
	6	OBTOT	.07	.80	.39	-.20

TABLE 37 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	SAMETEAC	1.05	.31	.16	-.16
CLASSROOM	2	OBTOT80	.79	.38	.21	.12
1980	3	WALTOT80	.25	.62	.23	-.01
	4	TO80	.12	.74	.23	.03

TABLE 38

Multiple Regressions Predicting Mathematics Achievement (KEYMAT80) for Promoted Children

Cluster	Step	Varible	F to Enter	Significance	Multiple R	Simple R
	1	TOTKEYM	64.18	.00	.77	.77
	2	READING	.03	.86	.77	.29
	3	PIAGET	4.37	.04	.80	.57
CHILD	4	TOTSC	3.07	.09	.81	.41
STATUS	5	VOCABSS	2.62	.11	.83	.55
	6	SIZE	.27	.61	.83	.07
	7	PINTER	.09	.77	.83	.02
	8	BLODESSS	.02	.90	.83	.28
TEACH,	1	ACADRE	4.12	.05	.09	-.30
CHILD	2	SOCAFF	3.38	.07	.07	.08
ATTITUDE	3	ATTENDP	2.17	.15	.04	-.21
AND	4	REACTION	.84	.36	.02	-.21
REASON	5	SUCCESSP	.44	.51	.01	.19
	6	CHATT	.05	.83	.00	.05
	1	PINV	5.68	.02	.34	-.34
	2	AMB	1.88	.18	.39	-.11
PARENT	3	UNHAPS	.50	.48	.41	-.04
ATTITUDE	4	INVSCH	.16	.69	.41	.14
	5	DISCUST	.28	.60	.42	.05
	6	PARATT	.07	.80	.42	.01
	7	BIOR	.05	.83	.42	.04

TABLE 38 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	PRESCH	4.70	.04	.30	.30
	2	PUPILSEX	1.80	.19	.35	.17
EARLY	3	AGE1	.58	.44	.37	-.12
LIFE	4	TEMPER	.44	.51	.38	.13
	5	WABCS	.28	.60	.39	-.05
	6	EARDEV	.03	.87	.39	.04
	7	STRESSE	.03	.88	.39	-.02
	1	ETHNIC	13.97	.00	.48	.48
	2	BWOCC	1.64	.21	.51	-.17
FAMILY	3	MAGE	1.09	.30	.52	-.08
BACKGROUND	4	STRESS80	.36	.55	.53	-.06
	5	PTIME	.42	.52	.53	-.11
	6	STRESS79	.02	.89	.54	.07
	1	VIEWS	4.50	.04	.32	.32
	2	OBTOT	.95	.34	.35	-.20
CLASSROOM	3	TOTOT	.80	.38	.38	-.09
1979	4	WALTOT	1.80	.19	.42	-.22
	5	AGAIN	.43	.52	.44	.07
	6	CTREL	.44	.51	.45	-.12

TABLE 38 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
CLASSROOM	1	OBTOT80	.42	.53	.10	.10
1980	2	WALTOT80	.14	.71	.12	.02
	3	SAMETEAC	.08	.77	.13	-.05

TABLE 39

Multiple Regressions Predicting Teacher Ratings of Self-concept (CRITSELC) for Promoted Children

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	TOTSC	.33	.57	.09	.09
	2	PINTER	.13	.72	.10	.03
	3	BLODESSS	1.27	.27	.20	.19
CHILD	4	TOTKEYM	.89	.35	.25	.19
STATUS	5	VOCABSS	1.49	.23	.31	-.03
	6	PIAGET	.39	.54	.32	.03
	7	READING	.29	.59	.33	.15
	8	SIZE	.12	.73	.34	-.07
TEACH,	1	ACADRE	1.01	.32	.15	-.15
CHILD	2	SOCAFF	.60	.44	.19	.03
ATTITUDE	3	SUCCESSP	.63	.43	.23	.15
AND	4	CHATT	.04	.84	.23	.08
REASON	5	REACTION	.04	.85	.23	-.00
	6	ATTENDP	.02	.89	.23	-.04

TABLE 39 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	UNHAPS	4.27	.05	.30	.30
	2	PARATT	4.70	.04	.43	.24
	3	DISCUST	4.35	.04	.51	.19
PARENT	4	INVSCH	1.42	.24	.53	.19
ATTITUDE	5	BIOR	1.37	.25	.56	-.10
	6	DCM	1.06	.31	.57	.10
	7	AMB	.33	.57	.58	-.10
	8	PINV	.07	.79	.58	.02
	1	STRESSE	5.38	.03	.32	-.32
	2	AGE1	.18	.67	.33	.10
EARLY	3	PRESCH	.16	.69	.33	.07
LIFE	4	TEMPER	.12	.73	.33	.02
	5	WABCS	.03	.86	.34	-.01
	6	PUPILSEX	.03	.87	.34	-.02
	7	EARDEV	.01	.90	.34	-.05
	1	PTIME	1.36	.25	.17	-.17
FAMILY	2	BWOCC	.81	.37	.21	-.13
BACKGROUND	3	MAGE	.54	.47	.24	.15
	4	STRESS79	.33	.57	.25	-.12
	5	STRESS80	.17	.68	.26	.13
	6	ETHNIC	.13	.72	.26	.08

TABLE 39 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	AGAIN	1.05	.31	.16	-.16
CLASSROOM	2	TOTOT	.42	.52	.19	-.10
1979	3	WALTOT	.79	.38	.24	-.05
	4	CTREL	.25	.62	.25	.02
	5	VIEWS	.31	.58	.26	.09
	1	WALTOT80	1.71	.20	.20	-.20
CLASSROOM	2	TO80	.13	.72	.21	.14
1980	3	SAMETEAC	.04	.85	.21	-.08
	4	OBTOT80	.01	.90	.21	-.12

TABLE 40

Multiple Regressions Predicting Pupil Behavior

Rating Scale Scores (PBRS 80) for Promoted Children

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	PINTER	11.62	.001	.46	.46
	2	TOTSC	1.01	.32	.48	-.25
	3	READING	5.18	.03	.56	-.33
CHILD	4	VMIRS	6.04	.02	.64	-.30
STATUS	5	VOCABSS	1.80	.19	.66	.17
	6	BLODESSS	.36	.55	.66	-.16
	7	PIAGET	.27	.60	.67	.00
	8	SIZE	.28	.60	.67	.20
	9	TOTKEYM	.15	.70	.67	-.13
TEACH,	1	SOCAFF	4.54	.04	.31	.31
CHILD	2	CHATT	1.69	.20	.36	-.13
ATTITUDE	3	SUCCESSP	.86	.36	.39	-.26
AND	4	ATTENDP	.76	.39	.41	-.08
REASON	5	ACADRE	.14	.71	.41	.14
	6	REACTION	.04	.84	.41	.02

TABLE 40 (Cont'd.)

Cluster	Step	Variable	F to Enter	Singificance	Multiple R	Simple R
	1	PARATT	2.13	.15	.22	-.22
	2	INVSCH	1.39	.25	.28	-.17
PARENT	3	BIOR	.92	.34	.31	-.10
ATTITUDE	4	DCM	.16	.69	.32	-.15
	5	UNHAPS	.15	.71	.32	-.09
	6	DISCUST	.09	.77	.33	.01
	7	AMB	.02	.89	.33	.14
	1	PUPILSEX	3.26	.07	.25	.25
	2	AGE1	2.73	.11	.34	-.24
EARLY	3	STRESSE	1.50	.23	.38	.20
LIFE	4	WABCS	.80	.38	.40	.18
	5	TEMPER	.43	.51	.41	.15
	6	PRESCH	.23	.63	.42	.05
	7	EARDEV	.01	.92	.42	.00
	1	STRESS79	1.90	.17	.20	-.20
FAMILY	2	PTIME	1.06	.31	.25	.13
BACKGROUND	3	STRESS80	1.31	.26	.30	.10
	4	ETHNIC	.39	.54	.31	.04
	5	MAGE	.17	.68	.31	-.04
	6	BWOCC	.11	.75	.32	.03

TABLE 40 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	AGAIN	8.42	.01	.42	.42
	2	WALTOT	1.56	.22	.45	-.19
CLASSROOM	3	TOTOT	.62	.44	.47	.00
1979	4	BTOT	.07	.80	.47	-.09
	5	VIEWS	.07	.80	.47	-.03
	6	CTREL	.06	.80	.47	.17
	1	WALTOT80	1.54	.22	.19	.19
CLASSROOM	2	OBTOT80	2.96	.09	.32	-.07
1980	3	SAMETEAC	.69	.41	.35	-.06
	4	TO80	.19	.67	.35	-.11

TABLE 41

Multiple Regressions Predicting Total Self-concept Score (TOTSC80) for Promoted Children

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	TOTSC	3.78	.06	.28	.28
	2	PINTER	.47	.50	.30	.03
	3	VMIRS	3.68	.06	.41	.33
CHILD	4	TOTKEYM	1.22	.28	.44	.28
STATUS	5	SIZE	1.17	.29	.46	.19
	6	BLODESSS	.93	.34	.48	.19
	7	READING	.43	.52	.49	.11
	8	VOCABSS	.20	.66	.50	.21
	9	PIAGET	.16	.70	.50	.14
TEACH,	1	CHATT	9.07	.00	.42	.42
CHILD	2	SOCAFF	.84	.37	.44	.20
ATTITUDE	3	SUCCESSP	.62	.44	.45	.16
AND	4	ATTENDP	.22	.64	.45	.11
REASON						
	1	PARATT	.71	.40	.13	-.13
	2	DISCUST	.37	.54	.16	.10
PARENT	3	PINV	.27	.61	.18	-.11
ATTITUDE	4	AMB	.11	.74	.18	.11
	5	DCM	.07	.80	.19	-.09
	6	BIOR	.02	.88	.19	-.04

TABLE 41 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	AGE1	5.46	.02	.32	.32
	2	PRESCH	3.66	.06	.41	.25
EARLY	3	PUPILSEX	4.10	.05	.49	.24
LIFE	4	WABCS	3.13	.08	.54	-.26
	5	STRESSE	1.62	.21	.56	-.23
	6	EARDEV	.06	.81	.56	.06
	7	TEMPER	.08	.79	.56	-.06
	1	STRESS79	1.44	.24	.17	.17
FAMILY	2	STRESS80	1.04	.31	.23	-.15
BACKGROUND	3	BWOCC	.49	.49	.25	.12
	4	MAGE	.05	.82	.25	-.08
	5	ETHNIC	.01	.91	.25	.03
	1	CTREL	.69	.41	.13	-.13
	2	VIEWS	.33	.57	.16	-.03
CLASSROOM	3	WALTOT	.58	.45	.20	-.05
1979	4	TOTOT	.71	.41	.24	-.07
	5	OBTOT	.30	.59	.26	.00
	6	AGAIN	.02	.88	.26	-.06
	1	SAMETEAC	.30	.59	.09	.09
CLASSROOM	2	OBTOT80	.19	.66	.11	.08
1980	3	WALTOT80	.02	.89	.11	.05

TABLE 42

Multiple Regressions Predicting Parent Ratings of Emotional Development (PARAEC) for Promoted Children

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	PINTER	4.60	.04	.31	-.31
	2	PSIZE	1.13	.30	.35	-.23
	3	TOTKEYM	.50	.48	.36	-.10
CHILD	4	TOTSC	.03	.86	.36	.07
STATUS	5	BLODESSS	.47	.50	.38	.14
	6	VMIRS	.32	.57	.39	-.12
	7	PIAGET	.26	.62	.39	.03
	8	READING	.15	.70	.40	-.02
	9	VOCABSS	.09	.76	.40	-.11
TEACH,	1	ATTENDP	1.65	.21	.19	-.19
CHILD	2	ACADRE	.30	.59	.21	.08
ATTITUDE	3	SOCAFF	.42	.52	.23	-.05
AND	4	REACTION	.20	.65	.24	.03
REASON	5	CHATT	.03	.86	.24	.03
	1	AMB	3.94	.05	.29	-.29
	2	BIOR	1.67	.20	.34	.24
PARENT	3	PARATT	2.03	.16	.40	.27
ATTITUDE	4	PINV	1.90	.18	.45	-.10
	5	INVSCH	.52	.47	.46	.16
	6	DISCUST	.20	.66	.46	-.06

TABLE 42 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	EARDEV	1.54	.22	.18	.18
EARLY	2	PUPILSEX	1.18	.28	.24	-.13
LIFE	3	PRESCH	.79	.38	.27	-.11
	4	STRESSE	.10	.75	.27	.09
	5	AGE1	.12	.73	.28	.07
	6	WABCS	.09	.76	.28	-.07
	1	MAGE	4.04	.05	.28	-.28
FAMILY	2	ETHNIC	2.89	.10	.37	.22
BACKGROUND	3	STRESS80	1.64	.21	.40	-.19
	4	STRESS79	.76	.39	.42	-.05
	5	PTIME	.59	.45	.44	.15
	6	BWOCC	.02	.88	.44	.06
	1	WALTOT	3.02	.09	.27	.27
	2	OBTOT	1.80	.19	.33	-.02
CLASSROOM	3	TOTOT	.24	.63	.34	-.14
1979	4	CTREL	.24	.63	.35	-.00
	5	AGAIN	.14	.71	.35	-.08
	6	VIEWS	.06	.81	.36	-.06

TABLE 42 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	OBTOT 80	1.70	.20	.20	-.20
CLASSROOM	2	WALTOT 80	.83	.37	.25	-.02
1980	3	TO80	.68	.42	.28	.15
	4	SAMETEAC	.54	.47	.30	-.10

TABLE 43

Multiple Regressions Predicting Teacher Ratings of Social Skills (CRITSOC) for Promoted Children

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	PINTER	26.62	.00	.62	.62
	2	TOTSC	.63	.43	.63	-.25
	3	VMIRS	2.61	.11	.65	-.20
CHILD	4	VOCABSS	2.25	.14	.68	.27
STATUS	5	READING	2.64	.11	.70	-.20
	6	PIAGET	.32	.57	.71	-.01
	7	SIZE	.12	.73	.71	.14
	8	TOTKEYM	.03	.86	.71	-.06
TEACH,	1	SOCAFF	13.03	.00	.48	.48
CHILD	2	ATTENDP	4.09	.05	.55	.27
ATTITUDE	3	SUCCESSP	2.56	.12	.58	-.36
AND	4	ACADRE	.52	.48	.59	.21
REASON	5	REACTION	.46	.50	.60	.15
	6	CHATT	.34	.57	.60	-.07

TABLE 43 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	PARATT	1.64	.21	.19	-.19
	2	DISCUST	1.37	.25	.26	-.16
	3	BIOR	1.28	.26	.31	-.15
PARENT	4	INVSCH	.93	.34	.34	-.16
ATTITUDE	5	DCM	.64	.43	.36	.01
	6	AMB	.05	.82	.36	.13
	7	PINV	.09	.77	.37	.07
	8	UNHAPS	.04	.85	.37	-.16
	1	WABCS	4.52	.04	.30	.30
	2	PUPILSEX	3.29	.08	.39	.27
EARLY	3	AGE1	2.77	.10	.45	-.26
LIFE	4	TEMPER	2.37	.13	.49	-.13
	5	EARDEV	3.00	.09	.54	-.16
	6	PRESCH	.68	.41	.55	.05
	7	STRESSE	.77	.38	.56	.09
FAMILY	1	STRESS80	1.06	.31	.15	.15
BACKGROUND	2	ETHNIC	.19	.67	.16	.07
	3	STRESS79	.05	.83	.16	-.03
	4	BWOCC	.04	.85	.17	.02

TABLE 43 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	AGAIN	9.85	.00	.44	.44
	2	VIEWS	.47	.50	.46	-.15
CLASSROOM	3	CTREL	.21	.65	.46	.26
1979	4	OBTOT	.08	.78	.46	.03
	5	TOTOT	.03	.85	.46	-.02
	6	WALTOT	.07	.80	.46	-.04
	1	TO80	5.20	.03	.34	.34
CLASSROOM	2	OBTOT80	.84	.36	.37	.01
1980	3	SAMETEAC	.40	.53	.38	-.11
	4	WALTOT80	.03	.88	.38	-.10

TABLE 44

Multiple Regressions Predicting Parent Ratings of Social Skills (PARSOC) for Promoted Children

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	SIZE	3.31	.08	.27	-.27
	2	PINTER	.24	.63	.28	.00
	3	TOTKEYM	2.20	.15	.35	.21
CHILD	4	TOTSC	.33	.57	.36	.00
STATUS	5	BLODESSS	.92	.34	.39	.22
	6	VMIRS	.87	.36	.41	-.15
	7	PIAGET	.27	.60	.42	.24
	8	READING	.16	.69	.42	.21
	9	VOCABSS	.08	.78	.43	.19
TEACH,	1	SUCCESSP	2.76	.10	.25	.25
CHILD	2	ATTENDP	.71	.40	.28	-.16
ATTITUDE	3	CHATT	.24	.63	.29	-.01
AND	4	SOCAFF	.13	.72	.29	-.03
REASON	5	REACTION	.12	.74	.30	-.11
	6	ACADRE	.02	.89	.30	-.09

TABLE 44 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	UNHAPS	1.67	.20	.19	.19
	2	DCM	1.17	.29	.25	-.09
	3	PARATT	1.31	.26	.30	.12
PARENT	4	AMB	.59	.45	.33	-.18
ATTITUDE	5	PINV	.38	.54	.34	-.06
	6	BIOR	.36	.55	.35	.18
	7	DISCUST	.15	.70	.36	-.04
	8	INVSCH	.10	.75	.36	.09
	1	EARDEV	3.82	.06	.27	.27
EARLY	2	TEMPER	1.21	.28	.31	.07
LIFE	3	AGE1	.86	.36	.34	-.11
	4	PRESCH	.73	.40	.36	-.09
	5	PUPILSEX	.83	.37	.38	-.05
	6	WABCS	.08	.78	.38	-.04
	1	MAGE	2.25	.14	.21	-.21
FAMILY	2	BWOCC	2.08	.16	.30	-.16
BACKGROUND	3	ETHNIC	1.11	.30	.33	.14
	4	PTIME	.58	.45	.35	.12
	5	STRESS79	.35	.56	.36	-.04
	6	STRESS80	.01	.92	.36	-.06

TABLE 44 (Cont'd.)

Cluster	Step	Variable	F to Enter	Significance	Multiple R	Simple R
	1	AGAIN	.85	.36	.14	.14
	2	CTREL	.63	.43	.19	-.06
CLASSROOM	3	VIEWS	.09	.76	.20	-.02
1979	4	TOTOT	.10	.75	.20	.02
	5	WALTOT	.06	.80	.21	.05
	6	OBTOT	.19	.66	.22	.00
	1	OBTOT80	1.60	.21	.20	-.20
CLASSROOM	2	WALTOT80	1.23	.27	.26	.00
1980	3	SAMETEAC	1.51	.23	.32	-.17
	4	TO80	.86	.36	.35	.15

Profiles of Children

One of the objectives of this research was to identify if there were types of children who could most benefit from retention. In the preceding section, we reported efforts to identify variables predictive of success. In this section, we report on attempts to identify patterns of variables, or clusters of variables, that define types, or profiles. The methodology used comes from the biological sciences where classification and the creation of taxonomies has a long history.

Cluster Analysis of Cases on Pupil Measures of Immaturity The scores for the retained children on the nine immaturity variables (See Table 10) may be used to form subgroups of children who have related patterns of scoring. This procedure is termed cluster analysis on cases and has been programmed in the Bio-Medical Statistical package BMDP2M (Dixon and Brown, 1979). The procedure is roughly analogous to factor analysis except that subjects become the items grouped into "factors" and the variables become the points of reference, or cases. The BMDP2M program uses a hierarchical method, amalgamating cases on the basis of Euclidean distances between clusters of cases, starting with the first two most similar cases and continuing until all cases and clusters are amalgamated into one cluster. Subgroups of children are identified which have within subgroup homogeneity with respect to score profiles and between subgroup heterogeneity.

The output from BMDP2M is visual and there is no single universally accepted criteria to be used in deciding where a subgroup exists. Nevertheless, the visual tree diagram (Figure 3) does suggest two identifiable subgroups of approximately 20 cases each, plus a number of small 2-8 person subgroups. All that can be said of these latter groups is that they are largely "other" and are different from the members of the other subgroups.

For the purpose of analysis, they can be kept together as a single "other" group.

These visual results must be verified and the groups defined by an examination of the group means. The resulting three groups then, are subjected to multivariate analysis of variance (or discriminant analysis) with the nine predictors as the dependent variable to determine if they are, indeed, separate groups, and how they may be labeled.

Table 45 contains the means and standard deviations of the three groups on the defining variables. When these data were subjected to discriminant analysis the groups turn out to be different with respect to mathematics, self-concept, cognitive development, non-verbal IQ, and interpersonal skills. The standardized canonical discriminant function coefficients of the first discriminant function (eigenvalue .99, explaining 61.5% of the variance) indicate that self-concept, Vocabulary, Block Design, and Piaget are most helpful in defining the groups. Group 1 has low scores on all defining variables especially self-concept. Group 2 has high or medium scores on all definers, especially Piagetian cognitive development, and Group 3 has low math skills but good social skills with moderate scores on the other definers.

The next area of concern is to determine whether membership in these groups is related to outcome. Table 46 contains the means and standard deviations of the groups on the outcome measures. Analysis of variance indicates that the groups differ with respect to reading comprehension, Pupil Behavior, Rating Survey, and teacher ratings of social skills and of success of retention. Group 2 has higher scores in reading than group 3, and is rated by the teachers as having been the most successful. Group 3 seems still to be considered as having the best social and general skills by the teacher and has better scores than group 1 on CRITSOC and PBRS80.

FIGURE 3

Results of Cluster Analysis of Cases (BMDP2M)

on First Year Immaturity Measures for Retained Pupils

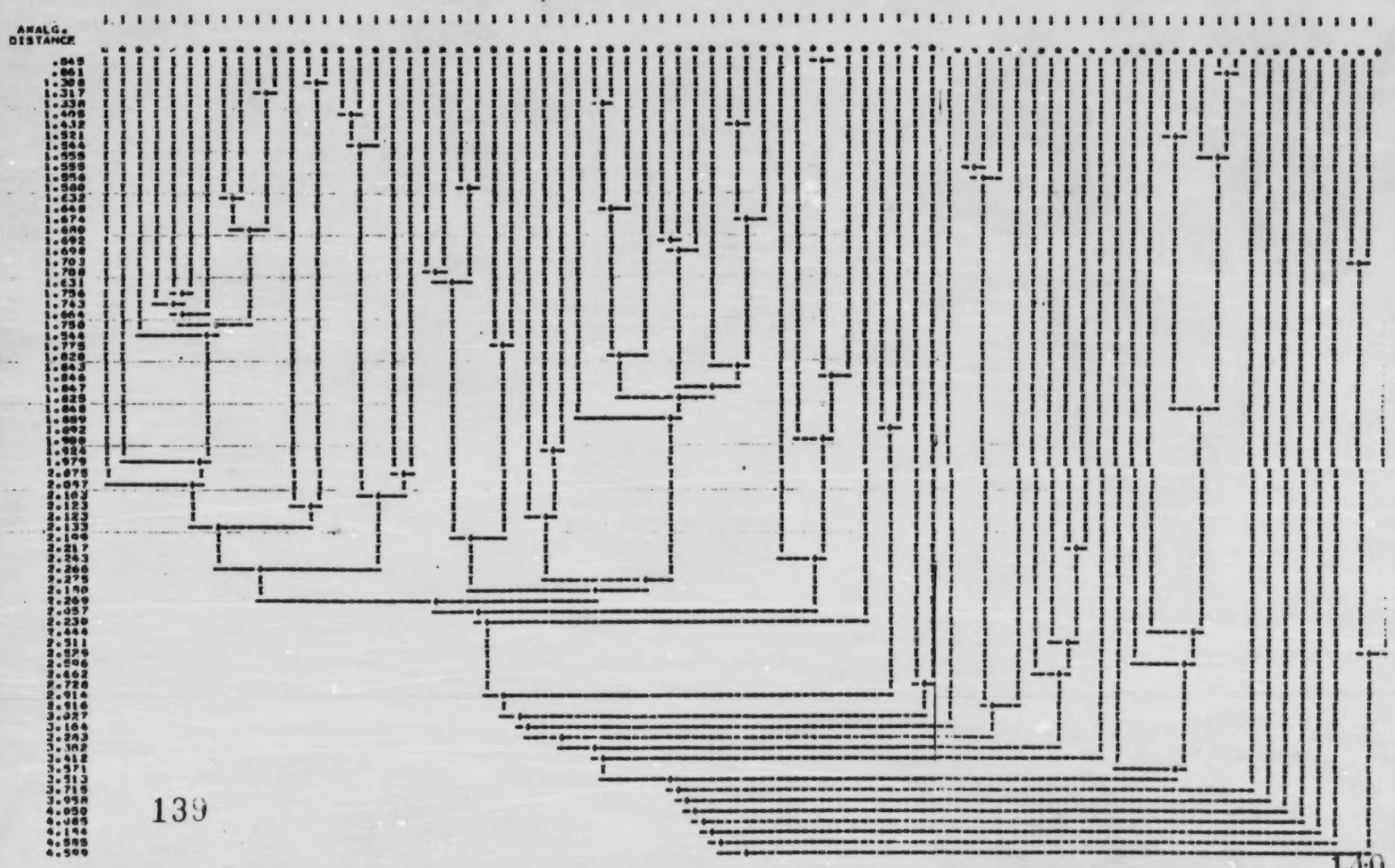

TABLE 45

Means and Standard Deviations of Definers

of Three Groups of Subjects Defined by Cluster Analysis

Number of Cases with complete data	Group 1		Group 2		Group 3	
	19		21		34	
	X	SD	X	SD	X	SD
READING	30.7	24.0	42.8	19.3	52.6	56.2
TOTKEYM*	40.2	3.0	42.9	3.2	37.6	7.6
VMIRS	10.7	.9	11.8	1.2	11.5	1.9
SIRE	4.0	1.9	4.1	3.2	3.0	2.0
TOTSC*	20.9	3.8	29.3	6.0	28.5	7.4
PIAGET*	5.9	2.4	8.8	1.3	6.4	2.9
BLODESSS*	8.1	1.7	11.0	1.9	9.1	2.8
VOCABSS	9.9	2.1	8.6	1.7	8.9	3.8
PINTER*	516.3	121.4	469.2	148.2	393.0	154.7

* Univariate F - ratio. Significant, $P \leq .05$

TABLE 46

Means and Standard Deviations of Three

Groups of Immature Children on Outcome Measures

Group	1		2		3		F	Sig
Number of Cases	18		21		37			
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD		
CRITACAD	21.9	3.1	18.9	4.5	19.2	5.2	2.7	.07
RECOMP80	62.6	25.1	72.2	17.4	53.0	31.7	3.2	.04
KEYMAT80	48.1	5.7	48.8	4.6	46.4	7.4	1.0	.38
CRITSELFC	32.8	11.1	34.0	12.2	35.0	10.2	.2	.78
PBRS80	1530.0	574.0	1120.0	468.0	1068.0	454.0	5.2	.00
PARAFFC	6.2	2.9	4.8	2.9	4.9	2.8	1.5	.23
TOTSC80	27.4	7.1	29.9	6.5	29.9	5.9	1.1	.35
CRITSOC	9.2	2.3	8.1	2.6	7.5	2.0	3.5	.04
PARSOC	1.6	1.0	2.0	1.5	1.3	.8	2.3	.11
CONSTRUC	2.1	1.3	1.1	.4	1.7	1.3	3.2	.05
RATESUC	8.5	1.9	8.2	2.0	8.5	1.8	.1	.87

Cluster Analysis of Pupil Outcome Measures

Heretofore we have been dealing with 11 different measures of outcome. It is interesting to see how the children become grouped on these outcomes and if there is a profile of outcomes that define groups.

The same procedure was used to generate clusters of children on the outcome. The results of BMDP2M again yielded three identifiable groups of 21, 29, and 26. Missing data reduced these groups to 12, 29, and 20 in size, each subject possessing complete data on all of the outcomes. Table 47 contains the means and standard deviations of the three groups on the eleven outcome variables used to define the groups.

A discriminant analysis applied to these data indicates that all variables discriminate the groups except KEYMATH80 and the parent rating of social skills. There are two significant canonical discriminant functions, the first, with an eigenvalue of 1.00, accounts for 64.2% of the variance. The contributors to this function as measured by the standardized discriminant function coefficients are self-concept and parent rating of social skill. The second function is defined by CRITSOC, RATESUC, PARAFFC, RECOMP80, CRITACAD, and PARSOC. The next task is to label the groups. The second group consists of children who are clearly successful across the board. Their achievement is highest, particularly in reading where they are significantly better than group 3. On the affective outcomes, they are better than group 3 on teacher ratings of self-concept, better than group 1 on parent ratings of emotional development and are rated as better adjusted overall on the PBRS than either of the other groups. They are rated as having better social skills than the other two groups by teachers and better than group 1 by parents. Teachers and parents rate their retention as being more successful than the other groups.

Group 1 is no different from group 2 on achievement tests, but is rated

TABLE 47

Means and Standard Deviations of Three Groups on the Eleven Outcome Variables Defining Them

	Group 1		Group 2		Group 3	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
CRITACAD*	21.6	3.2	17.6	3.8	22.5	5.9
RECOMP80*	65.8	21.4	69.6	23.1	45.4	30.1
KEYMATH80	48.3	6.6	48.9	4.4	46.0	7.7
CRITSELFC*	30.8	16.1	38.1	8.1	30.8	11.3
PBRS80*	1592.1	492.1	911.7	363.6	1396.0	504.6
PARAFFC*	7.5	3.7	5.4	1.8	5.3	1.9
TOTSC80*	27.3	6.7	32.6	4.2	25.4	6.3
CRITSOC*	10.0	2.5	6.7	1.5	8.2	2.3
PARSOC	2.2	1.5	1.4	.6	1.8	1.0
CONSTRUC*	1.7	.9	1.2	.4	2.3	1.7
RATESUC*	7.0	2.6	8.8	1.8	8.6	1.2

*Univariate F-ration significant, $P < .05$

as moderately successful by parents and teachers, and have medium self-concepts. They are rated worst of all by parents on all the parent measures and on the measure of social skills adjustment. Group 1 is moderately successful in academic areas but seems still to have problems in other areas, particularly as perceived by parents.

Group 3 consists of the children who are clearly the failures. Their scores are all lowest or at best, middle, of the three groups.

Upon so defining these groups it is interesting to learn what predicts membership in these three groups. A second discriminant analysis was conducted using the 20 most significant predictors from the multiple regression studies. This time there were 71 cases having complete data; the means and standard deviations of these predictors and the three groups are contained in Table 48.

The univariate F-ratios indicate that the groups differ with respect to reading skills, self-concept, vocabulary, interpersonal skills, and parents who participate in the school activities. As suspected, the successful group, (Group 2), earlier had the highest level of achievement, the highest self-concept, the largest vocabulary, the best social skills, and the most involved parents. The academic successes with affective and social failures (Group 1) initially had moderate reading skills, self-concept and vocabulary, but had the worst social skills and the least parental involvement.

As before, two canonical discriminant functions were generated. Function one, with an eigenvalue of 1.2 explained 65% of the variance; function two with its eigenvalue of .6 explained 35%. They had cannonical correlations of .73 and .62 respectively. Variables with high standardized cannonical discriminant function coefficients were TOTSC, VOCABSS, PARATT and PINTER for the first function, which was the only function significant. Table

49 contains the coefficients. The analysis classified 79% of group 1 correctly, 78% of group 2 and 80% of group 3. Overall 78.9% were correctly classified.

On the basis of this analysis, and Table 49, if one wished to predict which of these three groups an individual was likely to fall into, one would use the above variables. Successful children might be characterized not only by relatively good reading scores but good self-concept scores, social skills, vocabulary, and parents who are involved and have positive attitudes about retention and the school.

Relationship of Two Cluster Groups.

A natural question is whether the children are grouped the same way by the immaturity predictors as they are by the outcome predictors. Are the children in the second group of the prediction clusters the same as in the successful outcome group? When the two cluster groups are cross tabulated there is no relationship between the groupings formed by the predictors and the groupings formed by the outcomes (chi square = 2.6, P = .62). Having a particular pattern on the immaturity predictors was not related to an outcome pattern.

We speculate that this may mean that individuals do not cluster into a "syndrome" of immaturity that is generally related to outcome. Instead complex weightings of the predictors is necessary to determine outcome, and very different kinds of children can succeed and fail.

A Final Multivariate Analysis

The design of this research permits yet another all encompassing analysis, canonical correlation. In canonical correlation, one complete set of variables (in this case the 20 most powerful predictors), is correlated with another set of variables, the 11 outcome measures. The results yield the

TABLE 48

Means and Standard Deviations of Three Groups on Twenty Predictors

	Group 1 (N-19)		Group 2 (N=27)		Group 3 (N=25)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
READING*	39.4	30.7	66.3	51.8	24.7	27.1
TOTKEYM	39.6	6.1	40.9	4.1	38.1	7.4
TOTSC*	26.8	7.1	29.8	6.5	22.8	5.4
VOCABSS*	8.4	2.5	10.1	2.6	8.2	3.2
BLODESSS	9.5	2.4	8.9	2.7	9.8	2.6
PINTER*	505.4	174.7	390.4	124.1	447.0	149.6
PIAGET	5.8	3.1	7.0	2.3	7.2	2.6
SUCCESSP	2.8	.7	3.1	.6	2.7	.7
SOCAFF	6.7	3.4	6.5	2.7	7.9	3.0
ATTENDP	1.5	1.1	1.4	.8	1.7	1.1
ACADRE	12.1	2.6	11.3	2.4	12.6	2.3
PARATT	3.6	1.5	3.1	1.2	3.0	.9
PINV	2.4	.8	2.1	1.6	2.4	.9
INVSCH*	1.6	1.9	3.0	2.0	1.8	1.8
WABCS	1.6	.7	1.9	.9	1.8	.9
PRESCH	2.0	1.0	1.9	.9	1.9	1.0
OBTOT	56.0	11.5	51.7	7.3	55.3	11.1
UNHAPS	3.3	1.7	3.1	1.5	4.2	2.1
CTREL	1.6	.8	1.6	.8	2.0	.8
AGAIN	1.4	.7	1.3	.6	1.7	.9

TABLE 49

Standardized Canonical Discriminant Function

Coefficients for Function 1

READING	32
TOTKEYM	-16
TOTSC	55
VOVABSS	67
BLODESSS	-30
PINTER	-42
PIAGET	-25
SUCCESSP	12
SOCAFF	03
ATTENDP	-11
ACADRE	-11
PARATT	67
PINV	-08
INVSCH	37
WABCS	-01
PRESCH	-17
OBTOT	10
UNHAPS	-47
CTREL	-21
AGAIN	-01

patterns of interdependency between the sets, the number of significant links, and the amount of variance in common between the two sets (Levine, 1977).

When the 20 predictors and 11 outcomes are canonically correlated, three significant canonical variables are obtained with canonical correlations of .93, .92, and .88. Table 50 contains the coefficients for the three canonical variables. Only 56 cases had complete data. From the table it appears that achievement, verbal intelligence, and initial social skills are related to and predict social skills outcomes; reading skill and being retained for social or affective reasons is related most to PBRS total score as an outcome; and reading, verbal IQ, social skills, and parent attitude are related to achievement status as an outcome. This analysis is consistent with the other findings.

TABLE 50

Coefficients for Canonical Variables of Both Sets.

(Coefficients less than .40 omitted)

N = 56

Canonical Variable	1	2	3
Eigenvalue	.86	.85	.77
READING	-.46	.43	-.65
TOTKEYM	-.70	-	-
TOTSC	-	-	-
VOCABSS	.57	-	.41
BLODESSS	-	-	-
PINTER	-.52	-	-.54
PIAGET	-	-	-
SUCCESSP	-	-	-
SOCAFF	-	-.40	-
ATTENDP	-	-	-
ACADRE	-	-	-
PARATT	-	-	.42
PINV	-	-	-
INVSCH	-	-	-
WABCS	-	-	-
PRESCH	-	-	-
OBTOT	-	-	-
UNHAPS	-	-	-
CTREL	-	-	-
AGAIN	-	-	-

TABLE 50 (Cont'd.)

	1	2	3
CRITACADS	-	-	-
COMPI8	-	-	-
KEYMATH80	-	-	.98
RATESELC	-	-	-
PBRS80	-	-.68	-
PARAFFC	-	-	-
TOTSC80	-	-	-
CRITSOC	_.77	-	-
PARSOC	-	-	-
CONSTRUC	-	-	-
RATESUC	-	-	-

The Promoted Children Compared to the Nonpromoted.

The intent of this study was not to compare the promoted children to the nonpromoted children; rather we hoped to predict success for those children who were held back in the first grade. Nevertheless, it is of some interest to contrast these two groups even if it is impossible to say, given our design, that promotion is better or worse than nonpromotion. A design in which children were randomly selected to repeat or to be moved ahead would be necessary to draw such conclusions.

We were still curious to learn how far ahead the children are who were promoted. We were particularly curious to learn if our successful group of nonpromotees was at the same level of achievement as the promoted group. Even though we cannot say whether or not they could have been even further advanced, should the successful group prove equal to the promoted group, we can argue they are no worse off in spite of loosing a year.

One-way analysis of variance was used to compare the three nonpromoted groups (defined by outcome) and the promoted group. The means of the four groups as well as other descriptive statistics are displayed in Table 51. Each of the outcomes, except the global ratings, were compared as well as the reading recognition subtest and the second grade level reading comprehension subtest score. This latter test was given only to those children passing the first grade level of the test, so the means represent biased sub-samples.

Three a-priori contrasts were performed along with the overall F test; 1) the successful group versus the promoted group, 2) the moderately successful group versus the promoted group, and 3) the three nonpromoted groups combined versus the promoted group. The F-ratio was not significant for CRITACAD, CRITSELC, PARAFF, and PARSOC, but was for the other dependent variables. The groups did not differ with respect to the four ratings by teachers and

TABLE 51

Means and Standard Deviations of Three Nonpromoted Groups and Promoted Group

GROUP		Nonpromoted 1		2		3		4		
Name		Academic Success But Still Problems		Successful		Failures		Promoted		
VARIABLE	NS	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	f
CRITACAD	21,29,27,71	20.6	2.9	17.6	3.8	21.9	6.0	21.5	9.4	2.3
RECOMP80	21,29,25,62	61.6	25.3	69.6	23.1	48.8	31.4	73.8	23.7	6.2*
KEYMAT80	21,29,25,62	47.1	6.2	48.9	4.4	45.9	8.0	53.5	7.1	10.5*
CRITSELC	21,29,27,62	33.3	12.8	38.1	8.1	30.0	11.2	34.0	11.2	2.6
PBRS80	21,29,24,57	1422.	514.	912.	364.	1342.	550.	1365.	407.	8.1*
TOTSC80	19,29,26,62	28.3	6.7	32.6	4.2	25.8	6.7	28.4	6.2	6.0*
PARAFF	21,29,27,71	5.2	4.2	5.4	1.8	4.8	2.8	4.9	3.5	.3
CRITSOC	21,29,27,71	9.5	2.3	6.7	1.5	8.7	2.7	7.7	3.7	4.2*
PARSOC	21,29,27,70	1.6	1.5	1.4	.6	1.7	1.1	1.4	1.1	.6
Word Recognition Raw Score	21,29,25,62	46.8	23.5	60.4	23.9	42.8	28.5	68.0	26.6	8.1*
Level 2 Reading Comprehension Raw Score	15,20,10,56	4.9	4.6	11.9	5.6	10.6	7.0	10.7	5.6	5.2*

* $P \geq .01$

147

parents.

For reading comprehension (RECOMP80), the last contrast alone was significant, indicating that the promoted group was superior to the nonpromoted group as a whole, but no different from the successful nonpromoted group or the moderately successful nonpromoted group. On the word recognition variable, contrasts 2 and 3 were significant indicating the promoted group was superior to the nonpromoted group as a whole and the moderately successful group, but not the successful group. At level 2 of reading comprehension, the second contrast was significant, again emphasizing that in reading, the successful group was equivalent to the promoted group in spite of remaining in the first grade.

In math, all of the contrasts were significant. The promoted group was superior to all nonpromoted groups in mathematics achievement.

On the Pupil Behavior Rating Survey, only contrast 1 was significant, indicating a difference between the successful group and the promoted group. The means in Table 51 indicate that the successful group is rated much better adjusted overall than the other groups. The same is true for the self-concept measure. The successful nonpromoted children score higher in self-concept. The successful children appear to have an affective status at outcome that is superior to the other groups. Their score on the first grade norms falls at the 25th percentile (low scores are good) and at the 30th percentile on the second grade norms, whereas the second grade promoted children's mean score falls at the 61st percentile on the second grade norms -- more maladjusted than average.

The F-ratio for the teacher rating of social skills (CRITSOC) was also significant. Here the second contrast was significant. The promoted group had better social skills than the moderate successful group, but no better

than the successful retained group.

To summarize, the successful retained group was only inferior to the promoted group in mathematics achievement. In other areas they were equivalent to or, in the case of emotional adjustment, were superior to, the promoted group. One may hypothesize that a successful nonpromotion leaves a child better off than promotion -- a hypothesis subject to further research.

SUMMARY AND CONCLUSION

This study revealed no startling or unexpected results. We did not discover a particular key aspect of immaturity, parental attitude, or classroom environment that makes a dramatic impact on the success of first grade nonpromotion. Instead, the findings make common sense. The best predictors of outcome were initial status in three important areas -- academic skills, emotional development, and social skills.

Some children repeating the first grade were successful (29 out of 76, or 38 percent in this study). These children appear to be children who had learned some academic material (particularly reading), had good self-concepts, and had adequate social skills. Their academic skills were not sufficient to enter second grade, however. They also had average vocabularies (or intelligence) and had parents who were involved in the school and had positive attitudes about retention. The child's physical size, visual-motor development, family background, early life, and teacher philosophy were relatively unimportant as to whether or not the child emerged successfully from the repeated year, ready for the second grade.

Those children who were successful made realistic gains. Except for mathematics, they achieved the same status as (or better than) their peers the year before who were fellow candidates to repeat, yet went on to second grade. One might argue the second graders excelled in math simply because

they were exposed to it. The differences between the successful nonpromoted children and the promoted children was particularly noteworthy in the emotional self-concept domain. Perhaps the blow of repeating the first grade is not as great to self-concept and emotional development as the fact of going on to the second grade and remaining at the bottom of the class. The successfully retained first graders emerged in the top third academically of their repeated first grade class.

It is important that the reader of this report realize that a variable that turns out to be significant is only a representative of a domain of variables. One must not take these results concretely. The data reduction procedure simply selected variables with good psychometric properties and good correlations with other variables to stand for a set of predictors. Also the multivariate correlational methods generally select first the variable with the highest correlations with the criterion then may relegate a variable highly correlated to both the predictor and criterion to an insignificant role in the prediction equation. Accordingly one should not attend to a particular measure of a psychological domain as being the only possible significant one.

Another caution in interpreting the present results is the fact that the success of the retention has been evaluated after only one year. The effects of this intervention may only be known as time passes. Will the favorable emotional adjustment of the successful group disappear? Will the successful group continue to be equivalent or better than the promoted group? What will happen as promoted and retained children reach adolescence and enter secondary schools? Time will reveal the answer to these questions. Funding will be sought to follow the children in this study into further schooling.

The children who were no better off after repeating the first grade, and who had, in effect, lost a year of their lives, were also identifiable. These

children had extreme scores on most measures of achievement and adjustment. Many of them also or instead had social and emotional problems that teachers thought (mistakenly) would improve with time. These are the kind of children who may be well served by special education. Retention should not be used as a substitute for special education. Other interventions for these children including promotion with special tutoring and counseling or psychotherapy should be tried.

Nonpromotion can be a positive experience for some children. However, children should be selected carefully for this intervention. For a significant minority of children retention has the intended effects. This study offers guidelines for choosing children to repeat the first grade. More research will be needed to validate these suggestions with new samples of children. Nevertheless, in the present study it was possible to predict success in nonpromoted first grade children to a fairly high degree of accuracy.

References

Abidin, R. R., Golladay, W. M., & Howerton, A. L. Elementary school retention: An unjustifiable, discriminatory and noxious educational policy. Journal of School Psychology, 1971, 9, 410-417.

Aguilera, A., & Keneally, K. G. School failure - Psychiatric implications. Journal of Child Psychiatry, 1954, 3(1), 88-92.

Ames, L. B. Is your child in the wrong grade? New York: Harper & Row Publishers, Inc., 1966.

Anfinson, R. D. School progress and pupil adjustment. Elementary School Journal, 1941, 41, 507-514.

Arthur, G. A study of the achievement of sixty grade 1 repeaters as compared with that of nonrepeaters of the same mental age. Journal of Experimental Education, 1936, 5, 203-205.

Ayres, L. B. Laggards in our school. New York: Russell Sage Foundation, 1909.

Bedoian, V. H. Social acceptability and social rejection of the underage, at-age and overage pupils in the sixth grade. Journal of Educational Research, March 1954, 47, 513-520.

Beery, K. E. Developmental Test of Visual-Motor Integration. Chicago, Follett Publishing Company, 1967.

Bentall, G. Failure and conditional promotion among elementary school children of normal intelligence. Journal of Exceptional Children, 1948, 14,(5), 138-139; 160.

Bocks, W. M. Non-promotion: "A year to grow?" Educational Leadership, 1977, 34(5), 379-383.

Brueckner, L. J. The cumulative effects of the policy of non-failing. Journal of Educational Research, 1934, 28(4), 289-290.

CTB/McGraw-Hill California Achievement Test, Monterey, CA: CTB/McGraw-Hill, Inc., 1977.

Caplan, P. J. The role of classroom conduct in the promotion and retention of elementary school children. Journal of Experimental Education, 1973, 41(3), 8-9.

Caswell, H. L. Nonpromotion in Elementary Schools. Field Studies, No. 4, Nashville: Division of Surveys and Field Studies, George Peabody College for Teachers, 1933.

Chansky, N. M. Progress of promoted and repeating grade 1 failures. Journal of Experimental Education, 1964, 32(3), 225-237.

Chase, J. A. A study of the impact of grade retention on primary school children. Journal of Psychology, 1968, 70, 169-177.

Chase, J. A. Differential behavioral characteristics of nonpromoted children. Genetic Psychology Monographs, 1972, 86, 219-277.

Clouse, M. A. Sharing personal and professional experiences of non-promotion with an elementary teacher. Theory Into Practice, 1965, 4(3), 111-113.

Coffield, W. H., & Blommers, P. Effects of non-promotion on educational achievement in the elementary school. Journal of Educational Psychology, 1956, 47(4), 235-250.

Connolly, A., Nachtman, W., & Pritchett, E. Key Math Diagnostic Arithmetic Test, Circle Pines, Minnesota: American Guidance Service, Inc., 1976.

Cook, W. W. Some effects of the maintenance of high standards of promotion. Elementary School Journal, 1941, 41, 430-437.

Dean, S. E. Pass or fail? A study of promotion policy. Elementary School Journal, 1960, 61, 86-90.

DiPasquale, G. W., Moule, A. D., & Flewelling, R. W. The birthdate effect. Journal of Learning Disabilities, 1980, 13(5), 234-238.

Dixon, W. J., & Brown, M.B. BMDP Biomedical Computer Programs P-Series, Berkeley: University of California Press, 1979.

Dobbs, V., & Neville, D. The effects of nonpromotion on the achievement of groups matched from retained first graders and promoted second graders. Journal of Educational Research, 1967, 60(10), 472-475.

Donofrio, A. F. Grade retention: Therapy of choice. Journal of Learning Disabilities, 1977, 10(6), 349-351.

Edwards, N. Nonpromotion in the elementary schools. Elementary School Journal, 1932, 33, 644-651.

Edwards, P. O. Promotions - Pro and con. Instructor, 1965, 66, 24; 112-113.

Ellerbrook, L. W., Boehlje, E., & Mercille, M. What are the requirements for promotion from first grade? National Elementary Principal, December 1946, 28-30.

Ellinger, B. D. Nonpromotion: A review essay. Theory Into Practice, 1965, 4 (3), 122-128.

Elsbree, W. S. Promotion and failure policies in the grade school. National Elementary Principal, 1946, (December), 4-9.

Farley, E., Frey, A., & Garland, G. Factors related to the grade progress of pupils. Elementary School Journal, 24(3): 186-93; November 1933.

Farley, E. S. Regarding repeaters - Sad effects of failures upon the child. Nation's Schools, 1936, 18(4), 37-39.

Finlayson, H. J. Nonpromotion and self-concept development. Phi Delta Kappan, November 1977, 205-206.

Gaite, S. J. H. On the validity of non-promotion as an educational procedure. Report to U.S. Office of Education, 1969.

Goodlad, J. I. Research and theory regarding promotion and nonpromotion. Elementary School Journal, 1952, 53, 150-155.

Goodlad, J. To promote or not to promote. Childhood Education, 1954, 30, 212-215.

Goodlad, J. I. Some effects of promotion and nonpromotion upon the social and personal adjustment of children. Journal of Experimental Education, 1954 22(4), 301-328.

Gordon, J. B. Mental-hygiene aspects of social promotion. Mental Hygiene, 1950, 34, 34-43.

Gredler, G. R. The birthdate effect: Fact or artifact? Journal of Learning Disabilities, 1980, 13(5), 9-12.

Gredler, G. R. Cumulative retention rate as an index of academic progress: A third look. Journal of Learning Disabilities, 1980, 13(5), 15-18.

Hall, W. F., & Demarest, R. Effect on achievement scores of a change in promotional policy. Elementary School Journal, 1958, 58, 204-207.

Heffernan, H. What research says about nonpromotion. California Journal of Elementary Education, 1952, 21,(1), 7-24.

Hollingshead, A. B., & Redlich, F. C. Social Class and Mental Illness: a Community Study. New York: Wiley, 1958.

Howell, J. The why of retardation: Teachers speak. National Elementary Principal, December 1946, 18-20.

Humphreys, P. The school's concern in nonpromotion. Theory Into Practice, 1965, 4(3), 88-89.

Jackson, G. B. The research evidence on the effects of grade retention. Review of Educational Research, 1975, 45(4), 613-635.

Josephina, S. Promotion, a perennial problem. Education, 1962, 82(6), 373-376.

Kamii, C. K., & Weikart, D. P. Marks, achievement, and intelligence of seventh graders who were retained (nonpromoted) once in elementary school. Journal of Educational Research, 1963, 56(9), 452-459.

Kayfetz, I. The emerging pattern of promotional policy. National Elementary Principal, December 1946, 3-6.

Keyes, C. Progress through the grades of city schools, New York: Bureau of Publications, Teachers College, Columbia University, 1911.

Knudsen, D. D., & Thomas, S. Some social factors to consider in nonpromotion. Theory Into Practice, 1954, 4(3), 99-102.

Koons, C. L. Nonpromotion: A dead-end road. Phi Delta Kappan, 1977(May), 701-702.

Kowitz, G. J., & Armstrong, C. M. The effect of promotion policy on academic achievement. Elementary School Journal, 1961, 61, 435=443.

Lambert, N. M., Bower, E. M., & Hartsough, C. S. The Pupil Behavior Rating Scale, Monterey, CA: Publisher's Test Service, 1979.

Leinhardt, G. Transitions rooms: Promoting maturation or reducing education? Journal of Educational Psychology, 1980, 72(1), 55-61.

Lennon, R. T., & Mitchell, B. C. Trends in age-grade relationships: A 35-year review. School and Society, 1955, 82, 123-125.

Levine, M. S. Canonical Analysis and Factor Comparison, Beverly Hills, CA: Sage, 1977.

Lieberman, L. M. A decision-making model for in-grade retention (nonpromotion). Journal of Learning Disabilities, 1980, 13(5), 268-272.

Light, H. W. Light's Retention Scale, San Rafael, California Academic Therapy Publications, 1977.

Lobdell, L. O. Results of a nonpromotion policy in one school district. Elementary School Journal, 1954, 54, 333-337.

McDaniel, E. McDaniel-Piers Young Children's Self-Concept Scale. West Lafayette, Indiana: Purdue Educational Research Center, Purdue University, 1973.

McElwee, E. W. A comparison of personality traits of 300 accelerated, normal, and retarded children. Journal of Educational Research, 1932, 26, 31-34.

McKinney, H. Promotion of pupils, a problem in education administration. Unpublished doctoral dissertation, University of Illinois, Urbana, 1928.

Mallinson, G. Research: To promote or not to promote. Journal of Education, 1954, 158, 155-158.

Morrison, I. E., & Perry, I. F. Acceptance of overage children by their classmates. Elementary School Journal, 1956, 56, 217-220.

Myers, V. C. The child who fails. Education, 1937, 57, 306-309.

National Education Association, Research Division. Selected references on promotion and failure. National Elementary Principal, 1946, 26, 47-48.

National Education Association, Research Division. Pupil failure and nonpromotion. (NEA Research Memo 2). Washington, D.C.: NEA, 1959.

National Education Association, Research Division. Teacher opinion poll. Promotion Policy. National Education Association Journal, 1962, 51(9), 57.

Novak, E. L. Sharing personal and professional experiences of nonpromotion with an elementary principal. Theory Into Practice, 1965, 4(3), 114-116.

Otto, H. J. Promotion of pupils in elementary schools (I). American School Board Journal, 1933, 87(July), 19-22.

Otto, H. J. Promotion of pupils in elementary schools (II). American School Board Journal, 1933, 87(August), 21-22.

Otto, H. J. Promotion of pupils in elementary schools (III). American School Board Journal, 1933, 87(September), 21-22.

Otto, H. J., & Melby, E. O. An attempt to evaluate the threat of failure as a factor in achievement. Elementary School Journal, 1935, 35, 588-596.

Owens, S. A., & Ranick, D. L. The Greensville program: A commonsense approach to basics. Phi Delta Kappan, 1977 (March), 531-533.

Peyton, J. Nonpromotion; related factors noted in Kentucky study. Education Digest, 1968, 34, 36-39.

Phye, G. D., & Halderman, B. Cumulative retention rate as an index of academic progress: A second look. Journal of Learning Disabilities, 1980, 13(5), 243-244.

Reinerz, H. Z., & Griffin, C. L. The second time around: A study of achievement and progress of boys who repeated one of the first three grades in school. American Journal of Orthopsychiatry, 1968, 38(2), 345-346.

Rolfe, P. Sharing personal and professional experiences of nonpromotion with children and parents. Theory Into Practice, 1965, 4(3), 104-110.

Russell, D. H. The influence of repetition of a grade and of regular promotion on the attitudes of parents and children toward school. California Journal of Elementary Education, 1952, 21, 29-41.

Sabatino, D. A., & Hayden, D. L. Psycho-educational study of selected behavioral variables with children failing the elementary grades. Journal of Experimental Education, 1970, 38(4), 40-57.

Sackett, E. B. A record of twenty-five special promotions. Elementary School Journal, 1936, 36, 776-780.

Sandin, A. A. Social and emotional adjustments of regularly promoted and non-promoted pupils. Child Development Monographs, No. 32. New York: Bureau of Publications, Teachers College, Columbia University, 1944.

Sandoval, J. The problem of early grade retention. Paper presented at the Annual Convention of the California Association of School Psychologists and Psychometrists, San Francisco, April 9, 1976.

Sandoval, J. Reliability and concurrent validity of Light's Retention Scale. Psychology in the Schools, 1980, 17, 442-445.

Saunders, C. M. Promotion or failure for the elementary school pupil? New York: Teachers College, Columbia University, 1941.

Scott, B. A., & Ames, L. B. Improved academic, personal, and social adjustment in selected primary-school repeaters. Elementary School Journal, 1969, 69, 431-439.

Solheim, A. Shall a child be retained in a grade? Minnesota Journal of Education, 1961, 41, 34.

Steadman, E. R. Fifteen who were not promoted. Elementary School Journal, 1959, 59, 271-276.

Stringer, L. A. Promotion policies and mental health. National Elementary Principals, 1958, 37(6), 32-36.

Stringer, L. A. Report on a retention program. Elementary School Journal, 1960, 60, 370-375.

Tanner, J. M. Physical growth and development. In J.O. Forfar and G.C. Arneil (Eds) Textbook of Pediatrics. New York: Churchill Livingstone, 1973.

Templin, R. S. W. A check-up of non-promotion. Journal of Education, 1940, 123(8), 259-260.

Thomas, S., & Knudsen, D. D. The relationship between nonpromotion and the dropout problem. Theory Into Practice, 1965, 4(3), 90-94.

Thompson, M. Because schools are burying social promotion, kids must perform to pass. American School Board Journal, 1979, 166, 30-32.

Tuddenham, R. A 'Piagetian' Test of Cognitive Development. In W. B. Dockrell (Ed.), On Intelligence. London: Methuen and Co., 1970.

Waetjen, W. B. The alleviation of nonpromotion, Theory Into Practice, 1965, 4 (3), 117-121.

Waetjen, W. B., & Ridsgway, R. "And one to grow on." Educational Leadership, 1960, 17, 313-317.

Walberg, H. J., & Thomas, S. C. Open Education: An Operational definition and Validation in Great Britain and United States, American Educational Research Journal, 1972, 9, 197-208.

Walberg, H. J., & Thomas, S. C. Defining Open Education. Journal of Research and Development in Education, 1974, 8, 4-13.

Walker, W. E. The slow-progress student in graded and nongraded programs. Peabody Journal of Education, 1973, 50, 191-210.

Wechsler, O. Wechsler Intelligence Scale for Children-Revised. New York, The Psychological Corporation, 1974.

White, D., & Howard, J. L. Failure to be promoted and self-concept among elementary school children. Elementary School Guidance and Counseling, 1973, 7(3), 182-187.

Woodcock, R. W. Woodcock Reading Mastery Test. Circle Pines, Minnesota: American Guidance Service, Inc., 1973.

Worth, W. H. Promotion or nonpromotion? Educational Administration and Supervision, 1960, 1(46), 16-26.

For each set of statements, put a "1" opposite the statement that you agree with most, a "3" opposite the one you agree with least and a "2" opposite the remaining statement.

A. The purpose of education is

1____to bring the child to a position where he may learn the established curriculum including both intellectual and social achievements

2____to provide a nurturing climate where the individual child may develop at his own pace, both in the social and intellectual realms

3____to introduce children to an increasingly wider range of concepts and skills covering both intellectual and social areas

B. Lesson content (in subjects other than reading) for the most part should

1____revolve around stimulating the children to develop ways to translate the new concepts and skills into their own, individual frames of reference

2____consist of exposing the children to proper materials and equipment, matching groups of children to materials at their readiness level

3____cover the materials suggested and developed by the authors of the textbooks, the workbooks and the teacher manuals

C. The goals for children at the end of the year include

1____promoting each child's achievement of skills appropriate to his learning potential

2____bringing as many children as possible up to grade level or higher

3____helping each child along in his achievement growth, but with more attention to those children with the lowest achievement

D. With respect to the pace of schooling children

1____the stress should be on teaching as early as possible to overcome their immaturities and to facilitate the acquisition of needed knowledge and correct patterns of behavior

2____since a child unfolds somewhat like a flower, the emphasis should be on providing resources when they are needed

3____the child should progress through an ever broadening set of experiences starting slowly on a subject and working up to its completion

E. The most important goal of education is:

1____To enable each child in the initial years of schooling to build a positive image of himself as learner and give him opportunities to develop active, thinking and creative ways of coping with the real problems of our culture.

2____To place children in comfortable classroom environments that are conducive to the development of their full potentials. To tailor the program to the needs of the children in each group.

E continued

3____To teach young children academic and social skills which will allow them to compete effectively in the schools.

F. The teacher's role is

1____to tell, communicate, direct, correct and praise desirable performance and behavior

2____analogous to that of the farmer or gardner: to provide a nurturing setting and proper "food" for growth and development

3____to guide, stimulate, challenge, model, elicit relevant tasks, provide experiences

G. In organizing a lesson, the primary emphasis is on

1____recognizing possible points of stress and possible blocks to growth and avoiding or removing them

2____arranging experiences so that children may come to develop ways of promoting their own development

3____organizing knowledge so that the teacher may communicate it as effectively as possible

H. The primary objective of the teacher should be

1____to provide specific and intensive instruction in selected areas of deficit in development and learning

2____to stimulate in each child deep involvement and self-direction in learning (Educational goals evolve continuously as a result of each child's progress)

3____to promote continuous, sequential progress of children in learning and in becoming ready to move on to the next level of schooling

I. In considering the use of media

1____the widest possible variety of materials should be made available for children to use as a means for gaining exposure to the ingredients needed to nourish their development. The teacher's task is to provide materials relevant to the children's stage of development.

2____the stress should be on verbal presentation by the teacher accompanied by display or demonstration through pictures or manipulable materials for students to use in follow-up lessons.

3____there should be multimedia materials available for both teacher and student-initiated activity. Manipulation and experimentation by students should precede verbalization of conclusions.

J. The best curriculum approach for children is

1____individual programs with the stress on creativity and activity

2____carefully planned readiness experiences delivered in small increments, maximizing the chance of success and supplying immediate information on success.

3____a guided discovery program with individual inquiry projects. Both individual and group work with much peer interaction and individual responsibility.

K. The daily schedule should be

1____planned and orderly but with a good deal of flexibility for taking into account children's interests, providing special opportunities and time to complete unfinished projects.

2____highly structured with specific types of activities taking place at the same time periods each day.

3____loosely organized around the needs and involvements of the children but with similar subjects grouped in the morning, etc.

L. Interpersonal relationships are best included in the curriculum by

1____responding to them in the setting of behavior in the classroom and emphasizing cooperation between teacher and children for instruction

2____providing opportunities for interpersonal contact, cooperation and group work. Individual freedom and leeway are allowed as long as they do not interfere with the rights and welfare of others in the group.

3____explicitly including them as an integral part of the instructional program, and considering them as important as an academic subject area

APPENDIX B

TEACHER INTERVIEW IR - IP

NONPROMOTION PROJECT

UNIVERSITY OF CALIFORNIA - DAVIS

TEACHER INTERVIEW I

Background Information:

Size of class _____

Number of teachers _____

Number of aides _____

Average student-teacher ratio _____

Grade level of class:

1. K - 1 combination
2. 1st only
3. 1 - 2 combination
4. 1 - 3 combination
9. other

Briefly describe (child's) performance within the classroom:

_____

_____

Where would you rank (child) in the following areas:

Academic standing in class	1 = lowest 5%
Social skills (ability to get along & interact with peers)	2 = lowest 10%
	3 = lowest 25%
Degree of self-control & ability to accept limits & rules	4 = middle 50%
	5 = upper 25%
Physical dexterity	9 = DK

Who originally brought up the idea of retention?

1. teacher
2. mother
3. father
4. both parents
5. mutual decision of home and school
9. DK

In your school district is parental consent required to retain a student?

1. yes
2. preferred, but not essential
3. no
9. DK

Reason for retention:

Briefly state the reasons for retention or for considering retention:

_____

To what degree were the following factors involved in the retention decision or in considering retention:

1 = not a consideration
2 = slight consideration
3 = moderate consideration
4 = strong consideration
5 = very strong consideration
9 = DK

Poor social skills; does not interact or get along well with other children.

Poor gross motor skills; is clumsy and uncoordinated.

Language problems; is immature in development of vocabulary and basic concepts.

Language problems; English is a second language. (i.e., bilingual)

Poor work habits, short attention span, difficulty concentrating.

Behavior problem; does not mind teacher or follow school rules.

Emotionally not ready for the demands of school.(i.e., easily upset, frequent crying and tantrum, overly shy and introverted)

Poor attendance, frequent absences.

Insufficient progress in learning to read.

Insufficient progress in learning arithmentic.

Insufficient progress in learning to write.

Low mental ability.

Other (Specify) _____

Do you feel (child) has specific academic problems that might require placement in a special education class?

1. definitely
2. perhaps
3. probably not
4. no
5. other
9. DK

Interventions:

What type of special help did (child) receive this year? _____

_____

Were any of the following used? Approximately how many hours per week?

1. individualized instruction 1 = yes; 2 = no; 9 = DK
2. additional classroom work with aide or tutor
3. involment in an extra program (reading lab, language development program, math lab, etc.)
4. speech therapy
5. private tutor outside of school
6. parental assistance at home
9. DK

Attitudes:

Teacher:

In general, how do you feel about retaining students? _____

_____

What statement comes closest to characterizing your view on retention:

1. Retention is an ineffective way of solving most problems; all children should be promoted.

2. Retention is beneficial only for a few select students.

3. Retention is beneficial only when appropriate interventions are provided.

4. Retention is beneficial in the majority of cases.

5. Retention is an excellent way to help students acquire necessary skills and maturity.

Is there any particular type of student that you feel specifically benefits from being retained? _____

_____

Do you think (child's) retention/promotion will be successful? Why or why not?

_____

_____

What statement comes closest to characterizing your feelings:

1. (Child) will probably not benefit from retention/promotion.
2. (Child) will probably show some improvement, but will always have difficulty in school.
3. Retention/promotion will probably help to alleviate the majority of (child's) difficulties.
4. Retention/promotion is the answer to (child's) difficulties.

Parent:

How would you describe the parents' attitude towards the possibility of retention? _____

_____

Which of the following statements best characterizes the parents' attitude:

1. They suggested the retention; if they had not, the school would now have considered retaining the child.
2. They suggested the retention, but the school would have considered reteaining the child anyway.
3. They are supportive, but it was the school's idea to retain the child.
4. They seem neutral to the idea of retention.
5. They are vaguely upset by the idea, but will go along with retention.
6. They have agreed to retain only reluctantly and after a great deal of persuasion.
7. They oppose the retention decision.
9. DK

How involved are the parents in school affairs?

1. Very active, assisted with various matter (PTA, room mother, aide)
2. Periodically came to school events.
3. Attended only scheduled conferences
4. No participation or contact with school
5. Other, specify: _____
9. DK

How often did the parents meet with you regarding the retention/promotion decision?

1. Have not met at all
2. Talked on phone only
3. Met once or twice
4. Have discussed the matter a number of times
9. DK

Child:

How is (child) reacting to the retention decision? _____

_____

Which of the following statements is most characteristic:

1. Eager to be retained
2. Disinterested
3. Agreed to retention only after parental persuasion
4. Does not want to be retained; but know he/she is behind
5. Becomes anxious or upset when retention is discussed
6. Does not know he/she will be retained
9. DK

Student-Teacher Relationship:

How would you describe your relationship with (child)? _____

_____

_____

What statement comes closest to characterizing your relationship:

1. Close, good friends, excellent relationship
2. Get along well; seems to be learning, but some strain
3. No better or worse than many in my class
4. At odds much of the time
5. Personality clash; cannot work together

Would you like to have (child) again next year if you were teaching second grade?

1. definitely
2. yes, but might do better in a different classroom
3. no, but would take (child) if necessary
4. definitely not
5. no other options available

Why? _____

APPENDIX C

TEACHER INTERVIEW IIR - IIP

NONPROMOTION PROJECT

UNIVERSITY OF CALIFORNIA - DAVIS

TEACHER INTERVIEW

Background Information:

Grade level of class

1. 1st only
2. 1-2 combination
3. 2nd only
4. special education Specify: EH/SC EH/LDG SLH other
5. other (specify)

Size of class _____

Number of full time paid aides _____

Number of part time paid aides _____ Total hours per week _____

Number of volunteers (parents, students, etc.) _____ Total hours/week _____

Were you provided with any information concerning (child's) performance last year? Code: 1 = no; 2 = yes; 9 = DK

1. talked to previous teacher briefly
2. talked to previous teacher at length
3. reviewed school records at beginning of year
4. reviewed school records mid-year
5. brief comments made by parents
6. extensive comments made by parents
7. other

Is (child's) primary language English?

1. yes
2. bilingual
3. Spanish
4. other language

Is (child) currently enrolled in speech or language therapy?

1. yes
   How often?
2. no
3. DK

Is (child) currently being evaluated/considered by the school for special education placement?

1. yes
2. no, but will be referred
3. no
4. already in special education
9. DK

Is (child) being seen by a reading/resource specialist?

1. yes
   How often?
2. no
3. Title I assistance
4. yes, but could not specify
9. DK

Child's Performance:

Using the following scale, how would you describe (child's) performance in:

learning to read
learning mathematics
learning to write (handwriting)
language development (vocabulary, concepts)
following directions
completing classroom assignments
ability to concentrate/attention span
ability to follow school rules
ability to get along with peers (cooperativeness)
acceptance by classmates (popularity)
fine motor development
gross motor development
other

1 = definitely above average
2 = above average
3 = average
4 = somewhat below average
5 = definitely below average
9 = DK

Typical School Day:

Class Composition (individual, small group, large group, class, etc.)

Did you make any specific changes in your program (that other children did not receive) to accomodate (child)? Example: individualizing curriculum, making special exceptions, etc.

1. yes, specify:
2. somewhat, specify:
3. no
8. special education
9. DK

What do you see as (child's) greatest strength in school? (Academic, social, personal, etc.)

_____

What do you see as (child's) greatest weakness in school? (Academic, social, personal, etc.)

_____

How would you rate (child's) progress over the past year?

1. accelerated
2. somewhat faster than most students
3. average
4. somewhat slower than others
5. definitely slower than most
6. inconsistent, specify:
9. DK

How confident do you feel in promoting (child) to the next grade? Do you feel he/she is ready?

1. very confident
2. confident
3. neutral
4. have some reservations
5. have strong reservations
6. will be retained
8. special education
9. DK

How would you describe (child's) attitude towards academic work?

resistant to school work	grudgingly muddles thru assignments	passively accepts most assignments	approaches some assign-ments with enthusiasm	approaches assignments with enthusiasm

How would you describe (child's) attutude toward non-academic school work? (Example: art, show and tell, P.E., etc.)

resistant to most activities	grudgingly engages in activities	passively engages in activities	approaches activities with some enthusiasm	approaches assignments with enthusiasm

How would you rate (child's) self concept?

very poor, negative towards self/ abilities	poor, puts self down at times	neutral, does not show feelings either way	positive, appears fairly confident with self/abilities	very positive is definitely confident with self/abilities

If retained, did (child) ever express any feelings about having to repeat the first grade? (Record type and extent of comments made.)

_____

_____

_____

If retained, dow you feel retention was a constructive intervention for this child?

1. most definitely
2. probably the best alternative available
3. neutral, don't feel strongly either way
4. ambivalent
5. definitely not
6. other
8. special education
9. DK

Parent Support:

How would you describe the parent(s) attitude toward this school year?

1. very psotive/supportive
2. generally positive
3. neutral
4. somewhat negative
5. negative
6. other, specify:
9. DK

How involved are (child's) parent(s) in school affairs?

1. very active; attended all school activities/conferences
2. active; came to majority of school activities/conferences
3. periodically came to school events/conferences
4. seldom attended school events/conferences
5. no contact with school
6. other, specify:
9. DK

COMMENTS:

APPENDIX D

PARENT INTERVIEW IR - IP

NONPROMOTION PROJECT

UNIVERSITY OF CALIFORNIA - DAVIS

ACHIEVEMENT

I would like to talk to you about (child) and his/her educational experiences.

*Did (child) attend preschool? (Head Start, academic day care, etc.)

1. no preschool experience
2. less than a year
3. one or more years
4. other
9. DK

*Did (child) have difficulty adjusting to kindergarten? Would you say he/she:

1. enjoyed it from the very beginning
2. was somewhat hesitant at first, but adjusted well after a week or so
3. took several months to adjust to the change
4. adjusted only towards the end of the year
5. never really adjusted
6. not applicable; no kindergarten experience
7. other
9. DK

Has (child) changed schools since starting kindergarten?

1. yes, once
2. yes, twice
3. yes, three times
4. yes, four or more times
5. no
6. DK

Did (child) learn the following things before he/she started the first grade?

To say his/her ABC's ?

1. yes (majority of alphabet)
2. only partially (half of alphabet)
3. not at all
4. still does not know
9. DK

To write his/her ABC's?

1. yes (majority of alphabet)
2. only partially (half)
3. not at all
4. still does not know
9. DK

The name of colors?

1. yes (6 or more)
2. only a few
3. not at all
4. still does not know
9. DK

How to count small change (pennies, nickels, dimes)?

1. yes (up to about 20¢)
2. a little (identify a few coins)
3. not at all
4. still does not know
9. DK

How to print his/her name?

1. yes
2. first name only
3. last name only
4. beginning letter(s) only
5. not at all
6. still does not know
9. DK

*When (child) started first grade did you expect that he/she would: (Regarding academics)

1. have difficulty in most areas
2. have difficulty in a few areas
3. be about average in most areas
4. average, but excel in a few areas
5. excel in most areas
6. other
9. DK

Has (child's) attitude toward school changed over the past two years? Please explain.

1. has always been negative
2. has definitely become more negative
3. is somewhat more negative
4. has always been neutral
5. has become somewhat more positive
6. is definitely more positive
7. has always been positive
8. other
9. DK

How confident is (child) about his/her ability to do school work?

1. extremely confident
2. fairly confident
3. confident in some areas, but not in others (specify)
4. not very confident
5. not at all confident
6. other
9. DK

*Do you feel that (child) is a child who might benefit from special help?

1. no
2. perhaps, but could not specify
3. yes (specify)
9. DK

If yes, which of the following? (Code: 1 = yes 2 = no 9 = DK)

additional tutoring
intensive instructional program
language program
speech therapy
special class placement
counseling
other

If yes, do you feel the school has provided that ehlp for your child? Do you expect that it will be provided next year?

1. no
2. only partially
3. yes
4. DK

What type of classroom situations and teaching styles seem best for your child? Would you say that (child) would do best in:

A structured classroom with strict guidelines or a permissive classroom that allowed for a lot of individual freedom and choice?	1. strict 2. combination 3. permissive 9. DK
A classroom where all students are expected to work on the same assignment at the same time or one where students are broken down into small groups to work on different assignments?	1. large grp 2. combination 3. small grp 9. DK
A classroom where the students have one central teacher for the entire day or a classroom where several teachers share the responsibility of teaching different subjects?	1. one main T 2. combination 3. several T 9. DK

A classroom where the teacher makes specific assignments or a classroom where students are allowed to chose what assignments they would like to work on?	1. T directed 2. combination 3. S choice 9. DK
A classroom where the teacher has high standards and expectations that she/he expects all students to meet or one where the teacher encourages each student to establish his/her own standards?	1. T standards 2. combination 3. S standards 9. DK

*How much schooling would <u>you</u> like (child) to receive?

1. some high school
2. finish high school
3. post high school training
4. some college
5. finish 4 years of college
6. graduate/professional school
9. DK

"As much as he/she would like."

1. stated
2. not stated

ATTITUDE AND INVOLVEMENT WITH SCHOOL

Next, I would like to find out about your feelings regarding the school system.

Are you happy with the school (child) is currently attending?

1. very pleased
2. moderately pleased
3. acceptable
4. some reservations
5. strong reservations
9. DK

How did you feel about the type of classroom (child) was in during the first grade (i.e., size, the way it was structured, etc.)

1. very pleased
2. moderately pleased
3. acceptable
4. some reservations
5. strong reservations
9. DK

How did you feel about (child's) first grade teacher?

1. excellent teacher
2. good teacher
3. average teacher
4. relatively poor teacher
5. very poor teacher
9. DK

*Do you feel (child's) performance would have been better if he/she had been assigned to a different teacher?

1. most definitely
2. perhaps
3. probably not
4. no
9. DK

During the past year did you ever meet with (child's) first grade teacher to discuss:

general academic progress
specific academic difficulties
behavior problems
physical problems
special class placement
other (specify)

Have you met with any other members of the school staff regarding (child)?

1. yes
2. no
9. DK

If yes, who did you meet with and who initiated the meeting?

	CODE:
principal	1= parent initiated
psychologist	2= school intiated
counselor	3= initiated by both parties
speech therapist	4= did not meet with
reading specialist	9= DK
other (specify)	

Are there any projects or acitivies that you have volunteered to help with at school?

1. yes
2. no
9. DK

If yes, (code: 1 = yes, 2 = no)

aide in classroom
PTA
special functions (school carnivals, picnics, class parties)
fund raisers
field trips
other

ATTITUDE TOWARD NONPROMOTION

Now I would like to find out your feelings toward the retention decision.

*What do you think about the decision to have (child) repeat the first grade? And your spouse?

	(A) Mother	(B) Father
1. strongly agree		
2. generally agree		
3. neutral		
4. have some reservations		
5. strongly disagree		
6. other		
9. DK		

*How does (child) feel about repeating the first grade?

1. strongly opposes the idea; is very upset about it
2. does not appear too happy with the idea but will go along
3. neutral; doesn't really seem to be concerned either way
4. appears somewhat happy and relieved
5. is eager to be in the first grade again next year
9. DK

*What is your understanding of why the school considered retaining (child)?

_____

_____

*Were any of the following factors discussed? (Code: 1=yes 2=no 9=DK)

difficulties in learning to read
difficulties in learning mathematics
delays in language development (vocabulary, basic concepts)
English as a second language (bilingualism)
difficulty in following directions
short attention span/difficulty concentrating
failure to complete classroom assignments
disrespect for school rules
difficulty in getting along with other children
tantrums and frequent crying
poor motor skills and coordination
frequent absences from school
other (specify):

*What do you hope will be the primary benefit of having (child) repeat the first grade? (Allow two choices)

1. improve academic skills
2. improve school behavior
3. improve maturity and study habits
4. improve physical coordination
5. increase self-confidence
6. other
9. DK

Has retention ever been suggested for any members of your family?
If yes, was he/she retained?

	Code:
mother	1 = yes, suggested
father	2 = yes, retained
sibling	3 = no
member of extended family	9 = DK
other	

PROMOTION

*Did the school ever discuss with you the possibility of have (child) repeat the first grade?

1. yes
2. mentioned the possibility
3. no
9. DK

If yes, what was your response to the suggestion? And your spouse's?

	(A)	(B)
1. strongly agreed	Mother	Father
2. generally agreed		
3. neutral		
4. had some reservations		
5. strongly disagreed		
6. other		
9. DK		

*How do you think (child) would have felt about repeating the first grade?

1. would have strongly opposed the idea; would have been very upset
2. probably would not have been too happy with the idea, but would have gone along
3. neutral; probably would not have cared
4. might have been somewhat happy and relieved
5. probably would have been eager to repeat the first grade
9. DK

*Did the school ever discuss with you any of the following concerns with respect to (child)? (Code: 1=yes 2=no 9=DK

difficulties in learning to read
difficulties in learning mathematics
delays in language development (vocabulary, basic concepts)
English as a second language (bilingualism)
difficulty in following directions
short attention span/difficulty concentrating
disrespect for school rules
difficulty in getting along with other children
tantrums and frequent crying
poor motor skills and coordination
frequent absences from school
other (specify):

Has retention ever been suggested for any members of your family? If yes, was he/she retained?

	Code:
mother	1 = yes, suggested
father	2 = yes, retained
sibiling	3 = no
member of extended family	9 = DK
other	

DESCRIPTION OF THE CHILD

What would you describe as (child's) three strongest areas or characteristics?

1. 2. 3.

In what areas or on what characteristics would you like to see (child) improve? (Allow three choices)

1. Academic
    1. ability to read
    2. ability to do math
    3. work habits
    4. handwriting
    5. language skills
    6. other
2. Social:
    1. maturity/manners
    2. ability to get along with other children
    3. ability to get along with adults
    4. popularity & leadership ability
    5. other
3. Emotional:
    1. even tempered
    2. sense of humor
    3. self-confidence
    4. assertiveness
    5. enthusiasm
    6. self-control
    7. other
4. Independent Skills:
    1. responsibility/dependability
    2. neatness/self-care
    3. other
5. Physical:
    1. athletic ability
    2. coordination
    3. looks/appearance
    4. health
    5. other

DISTRACTABILITY
(is easily interrupted)

Easily interrupted; has difficulty concentrating when other things are going on; mind jumps from one thing to another.	Concentrates well, can work or play in a situation where many things are taking place; does not mind interruptions.

ADAPTABILITY
(ability to change)

Accepting; adjusts quickly to new situations; enjoys novelty & new experiences.	Critical; uncomfortable in new situations; does not like changes.

MOODINES

Gloomy; short-tempered; irritable; and quarrelsome.	Cheerful; amiable; pleasant; happy.

POPULARITY/SOCIABILITY

Social; friendly; affable; outgoing; extroverted.	Very slow to warm up to people; shy; often prefers to work/play alone; introverted.

ACTIVITY LEVEL

Lethargic & slow moving; somewhat inactive.	Energetic; high energy level; always on the go.

COOPERATION

Uncooperative; has difficulty on tasks that require group effort; does not pitch in & do his/her part.	Works well with others in projects or games; likes to join in & help others.

INDEPENDENCE

Independent; is able to work alone to complete tasks.	Dependent; seeks help and support from others to complete most tasks.

INITIATIVE

Is fearful of new situations; needs a great deal of encouragement to attempt new tasks.	Self-motivated; takes on new tasks with enthusiasm; is not afraid of new challenges.

PERSISTANCE

(ability to stay with a task)

Does not give up easily; usually completes whatever he/she starts.	Bores easily; seldom stays with a task for more than a few minutes; gives up when frustrated.

HEALTH AND DEVELOPMENT

*How would you describe (child's) health?

1. very good
2. good
3. fair
4. poor
5. very poor
9. DK

Have there been any major changes in (child's) health in the last year?

1. health has improved significantly
2. health is somewhat better
3. no apparent changes
4. health is somewhat poorer
5. health is significantly poorer
9. DK

How would you describe (child's) early development (birth to five years)?

1. significantly slower than most children
2. somewhat slower than most children
3. average (i.e. met developmental milestones on time)
4. somewhat above average
5. accelerated (i,e. met milestones well before expected)
9. DK

Did (child) experience any serious accidents or illnesses as an infant/child?

1. yes, significant
2. no
3. moderately severe; not judged to be life threatening
9. DK

HOME ENVIRONMENT

Now I would like to talk to you about (child's) activities at home.

How does (child) usually spend most of his/her free time? (Allow 3 choices)

1. plays with other children
2. plays with brothers, sisters, or other relatives
3. plays by self
4. watches TV
5. sport activities (includes riding bike, swimming, etc.)
6. music
7. reading
8. household tasks
9. drawing, creative projects
10. homework
11. loafing
12. other (specify)
13. DK

*When (child) plays with other children, does he/she play mostly with older children, mostly with younger children, or with children his/her own age?

1. children of all ages
2. older children
3. same age
4. younger children
5. usually does not play with other children
9. DK

How well does (child) get along with his/her brothers and sisters?

1. very well
2. well: normal sibling relationship
3. sometimes well, other times not so well
4. poorly
5. very poorly
6. not applicable: does not have any siblings
9. DK

Are you often able to spend time during the day on an individual basis with (child)? Approximately how often? And your spouse?

	(A)	(B)
1. less than 15 minutes	Mother	Father
2. 15 minutes a day		
3 30 minutes a day		
4. 1 hour a day		
5. 2 hours a day		
6. more than 2 hours a day		
9. DK		

Do you (or your spouse) often find time to read or tell stores to (child)? Approximately how often?

1. seldom or never
2. once in a while
3. once a week
4. several times a week
5. regularly - once a day
6. frequently - twice a day
9. DK

*How often do you or your spouse help (child) with school related work (i.e. dittos, learning the alphabet, learning to count, writing)?

1. seldom or never
2. once in a while
3. twice a month
4. weekly
5. several times a week
6. daily
9. DK

FAMILY INFORMATION

Please list the members of your family living at home, starting with the oldest and including (child):

NAME	RELATIONSHIP	AGE

*What is your occupation? And your spouse's?

mother:

other main mothering person:

father:

other main fathering person:

What is the highest grade level that you completed? And your spouse?

1. some elementary school
2. eighth grade
3. some high school
4. high school graduate
5. some college
6. college graduate
7. graduate school
8. G.E.D.
9. DK

TO BE CODED BY INTERVIEWER:

Adults living in home:

1. mother and father
2. mother alone
3. father alone
4. other (specify)
9. DK

Number of children in home _____

Marital status:

1. married first time
2. married more than once
3. devorced
4. separated
5. widowed
6. co-habitating
7. other
8. combination

Child's ordinal position:

1. only child at home
2. oldest child at home
3. middle child at home
4. youngest child at home
9. DK

Age of parenting figures in home

	(A) Mother	(B) Father
1. 18-24		
2. 25-30		
3. 31-35		
4. 36-40		
5. 41-45		
6. over 45		
9. DK		

Ethnic background:

1. caucasian
2. black
3. hispanic
4. philippino
5. portuguese
6. asian
7. other (specify)
8. comination of above
9. DK

Languages spoken in the home:

1. English
2. Spanish
3/ Portuguese
4. Tagalog
5. other (specify)
9. DK

Have there been any difficulties or changes during (child's) childhood, such as :

Family illnesses or hospitalization

1. mother
2. father
3. sibling
4. project child
5 extended family
6. 2 or more of above
8. no
9. DK

Recent death in the family

1. mother
2. father
3. sibling
4. extended family
5. 2 or more of above
8. no
9. DK

Changes in family constallation (any new members)

1. step-mother
2. step-father
3. sibling
4. other adult
5. other children
6. other
7. 2 or more of above
8. no
9. DK

Family members leaving the household

1. mother
2. father
3. sibling
4. project
5. member of extended family
6. other
7. 2 or more of above
8. no
9. Dk

Entire family moving

1. once
2. twice
3. three times
4. four times
5. five or more times
6. no moves
9. DK

*Do you anticipate moving within the next year?
If yes, specify address if possible

uncertain

no

Extended period of unemployment

1. yes (more than six months)
2. less than six months
3. no
9. DK

Divorce or separation

1. yes
2. no
9. DK

INTERVIEWER'S COMMENTS.

Evaluation of rapport established

1. very positive
2. positive
3. neutral
4. negative
5. very negative

Persons present during interview

1. mother
2. father
3. mother and father
4. mother and other adult
5. father and other adult
6. other adult
7. mother and children
8. father and children
9. mother, father, and children
10. other adults and children
11. other

Persons reporting

1. mother
2. father
3. mother and father
4. relative
5. foster parent
6. other

Reaction to questions

1. no resistance
2. troubled, but responded
3. resistance

Other comments:

APPENDIX E

PARENT INTERVIEW IIR - IIP

NONPROMOTION PROJECT

UNIVERSITY OF CALIFORNIA - DAVIS

ATTITUDE TOWARD SCHOOL

Were you happy with the school that (child) attended this past year?

School in general:

1. very pleased
2. moderately pleased
3. acceptable
4. some reservations
5. strong reservations
6. ambivalent, very mixed feelings
9. DK

Type of classroom (size, structure, organization, etc.):

1. very pleased
2. moderately pleased
3. acceptable
4. some reservations
5. strong reservations
6. ambivalent
9. DK

Teacher:

1. excellent teacher
2. good teacher
3. average teacher
4. relatively poor teacher
5. very poor teacher
6. ambivalent
9. DK

Do you feel (child's) performance would have been better if he/she had been assigned to a different teacher.

0. not asked/no comment
1. most definitely
2. perhaps
3. probably not
4. no
9. DK

CHANGES OVER THE PAST YEAR

Have you noticed any changes over the past year in (child's):

Attitude towards school (eagerness to attend, etc.):

1. yes
2. perhaps
3. no
9. DK

1. positive direction
2. negative direction
3. neither

1. very positive
2. generally positive
3. neutral
4. somewhat negative
5. very negative
6. varies radically
9. DK

Confidence in ability to do school work:

1. yes
2. perhaps
3. no
9. DK

1. positive direction
2. negative direction
3. neither

1. very confident
2. moderately confident
3. average
4. little confidence
5. no confidence
6. varies radically
9. DK

Ability to get along with other children:

1. yes
2. perhaps
3. no
9. DK

1. positive direction
2. negative direction
3. neither

1. gets along very well
2. gets along fairly well
3. average
4. needs to improve somewhat
5. definitely needs to improve
9. DK

Self-concept/feelings about himself:

1. yes
2. perhaps
3. no
9. DK

1. positive direction
2. negative direction
3. neither

1. very positive
2. generally positive
3. neutral/average
4. somewhat negative
5. very negative
9. DK

Physical coordination - motor development:

1. yes
2. perhaps
3. no
9. DK

1. positive direction
2. negative direction
3. neither

1. excellent
2. goood
3. average
4. somewhat below average
5. poor
6. varies
9. DK

ATTITUDE TOWARD NONPROMOTION

Now I would like to find out your feelings about this past school year.

What do you now think about the decision to have (child) repeat the first grade? And your spouse?

1. strongly agree - an excellent decision
2. generally agree - basically a good idea
3. neutral - don't feel strongly either way
4. have some reservations - may not have been a good idea
5. strongly disagree - was definitely a mistake
6. ambivalent - very mixed feelings
9. DK

What were (child's) feelings about repeating the first grade?

1. was very upset about it
2. was not too happy with the idea, but went along
3. did not seem to be concerned; was not an issue
4. appeared fairly pleased with the idea
5. thoroughly enjoyed the year; liked being in the first grade again
6. unhappy at first, but adjusted well with time; enjoyed
7. not aware of retention due to class structure
9. DK

What do you see as the two most important things that (child) gained from repeating the first grade?

1. improved academic skills
2. improved school behavior
3. improved maturity and study skills
4. improved physical coordination
5. increased self-confidence
6. other
8. nothing
9. DK

Using a scale from one to ten where would you rate (child's) retention?

1 _____ 10
not successful very successful

Would you retain (child) if you had the decision to make over again? And your spouse?

1. yes, definitely
2. probably so
3. not sure
4. no
9. DK

Is there anything you would do differently if making the decision this year?

1. yes, specify: _____
2. no
3. DK

ATTITUDE TOWARD PROMOTION

Are you happy with the progress that (child) has made over the past year?

Academically?

Socially?

Maturity wise?

1. very pleased
2. somewhat pleased
3. acceptable
4. some reservations
5. strong reservations
6. mixed feelings
9. DK

What are your expectations for how well (child) will do in the third grade?

1. very well, no problems what-so-ever
2. well
3. average
4. difficulties in some areas
5. will probably have difficulties in most areas
6. child will be retained in second grade
9. DK

What would you say is (child's) strongest area and his weakest area?
(This can deal with any aspect of school, not just academic subjects.)

Strongest:

Weakest:

CONSULTATION & SPECIAL SERVICES

What type of special services, if any, are being provided by the school?

1. additional tutoring (e.g. Title I)
2. special language program (e.g. bilingual)
3. speech therapy
4. specialized tutoring
5. special class placement
6. counseling
7. other
8. none
9. DK

Do you feel your child needs some type of additional help or specialized assistance that is not being provided by the school?

1. no
2. yes, but could not specify
3. yes
    1. additional tutoring
    2. special language program
    3. speech therapy
    4. specialized tutoring
    5. special class placement
    6. counseling
    7. other
    9. DK

Is (child) receiving any special help outside of school:

1. yes, specify
2. some tutoring from parents
3. no
9. DK

During the past year did you ever meet with (child's) teacher to discuss:

	# of times
1. academic progress	
2. behavior problems	
3. physical problems	
4. need for special education/ special class placement	
5. other	
8. no	
9. DK	

During the past year did you ever meet with any other memebers of the school staff regarding (child)?

1. principal
2. psychologist
3. counselor/instructional aide
4. resource specialist/reading specialist
5. speech therapy
6. other
8. no
9. DK

SIGNIFICANT CHANGES

Have there been any changes, pro or con, in (child's) health during the past year that might have influenced his school performance? (Example: excessive number of absences?)

1. health is definitely better this year
2. health is somewhat better this year
3. no changes in health
4. health is somewhat worse than before
5. health is quite poor this year

Traumatic illnesses or hospitalizations of family members?

1. project child
2. parent
3. sibling
4. extended family
5. other significant inidvidual
6. hospitalization, but not significant
8. no
9. DK

Traumatic events or accidents? (Example: emotional stress)

1. yes, specify:
2. perhaps, specify:
3. no

Charges in household population? Specify.

New Members Death Divorce/Separation Moves/Relocations

Any other events, either negative or positive, that might have influenced (child's) performance?

1. yes, specify:
2. perhaps, specify:
3. no
9. DK

Anything else you would like us to know?

INTERVIEWER'S COMMENTS

Evaluation of rapport established

1. very positive
2. positive
3. neutral
4. negative
5. very negative

Person reporting

1. mother
2. father
3. grandparent
4. fosterparent
5. other relative
6. other

Reaction to questions

1. no resistance
2. troubled, but responded
3. resistance

COMMENTS: